

STIC Search Report

Biotech-Chem Library

STIC Database Tracking Number: 202218

TO: Rei-Tsang Shiao
Location: REM-5A10/5C18
Art Unit: 1626
Friday, September 22, 2006

Case Serial Number: 10/821621

From: Paul Schulwitz
Location: Biotech-Chem Library
REM-1A65
Phone: 571-272-2527

Paul.schulwitz@uspto.gov

Search Notes

Examiner Shiao,

Please review the attached search results.

If you have any questions or if you would like to refine the search query, please feel free to contact me at any time.

Thank you for using STIC search services!

Paul Schulwitz
Technical Information Specialist
REM-1A65
571-272-2527

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STIC SEARCH RESULTS FEEDBACK FORM

Biotech-Chem Library

Questions about the scope or the results of the search? Contact *the searcher or contact*:

Mary Hale, Information Branch Supervisor
571-272-2507 Remsen E01 D86

Voluntary Results Feedback Form

➤ I am an examiner in Workgroup: Example: 1610

➤ Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
(journal articles, conference proceedings, new product announcements etc.)

➤ Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to STIC/Biotech-Chem Library Remsen Bldg.

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9-941

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202218

ACCESS DB #

PLEASE PRINT CLEARLY

Scientific and Technical Information Center

SEARCH REQUEST FORM

Requester's Full Name: Robert (Rabang) Shiao Examiner #: 79521 Date: 9/18/06
 Art Unit: 1626 Phone Number: 0707 Serial Number: 10/821,621
 Location (Bldg/Room#): REM (Mailbox #): 5A10 Results Format Preferred (circle): PAPER DISK

 1548

To ensure an efficient and quality search, please attach a copy of the cover sheet, claims, and abstract or fill out the following:

Title of Invention: Simple steroidal

Inventors (please provide full names): Corey

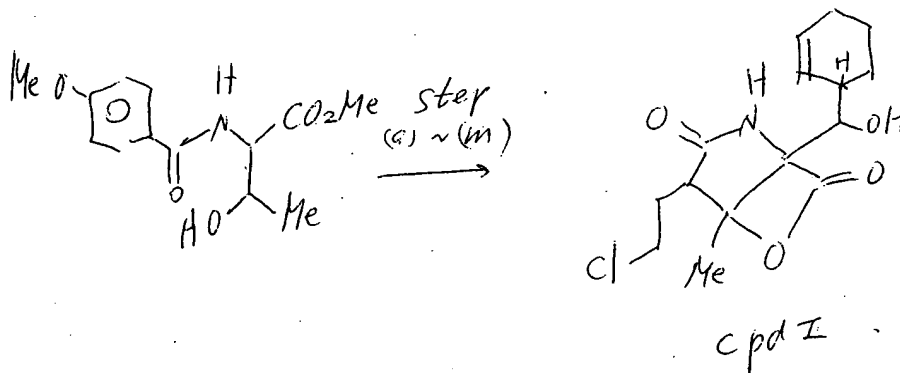
Earliest Priority Date: _____

Search Topic:

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known.

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

I seek a process of making cpd 2 by:



CA

L31

L32

L33

BS

L35

INU

L42

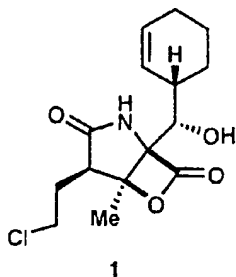
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IN THE CLAIMS:

Please amend the claims as shown in the following Claim Listing.

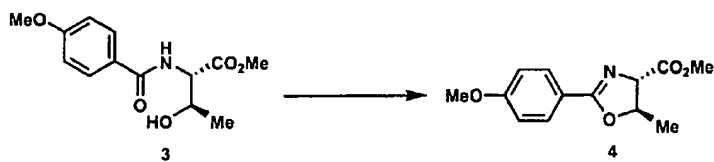
CLAIM LISTING:

1. (Original) A process for the enantiospecific total synthesis of the compound of structure 1:



comprising the steps of:

- (a) converting amide 3 to oxazoline 4:

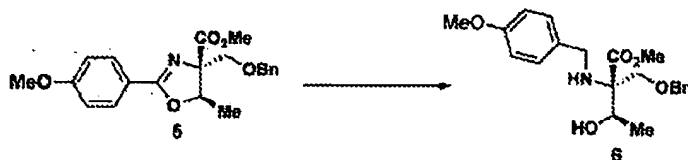


- (b) deprotonating 4 followed by alkylation of the resulting enolate to provide 5:

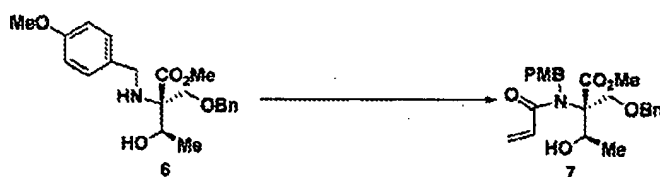
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(c) reducing 5 to yield the N-4-methoxybenzylamine 6:



(d) acylating 6a (structure not shown, OH in 6 is OTMS) to afford the N-acrylyl-N-PMB derivative 7:

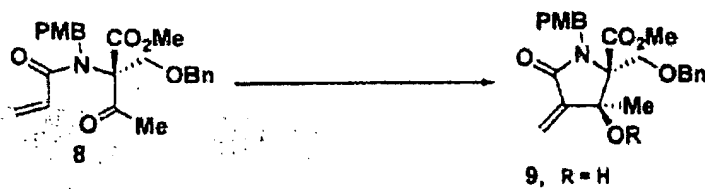


(e) oxidizing 7 to produce the keto amide ester 8:

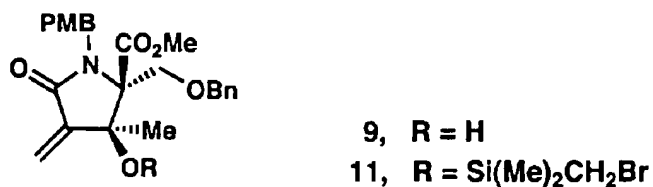


(f) cyclizing 8 to afford the γ -lactam 9:

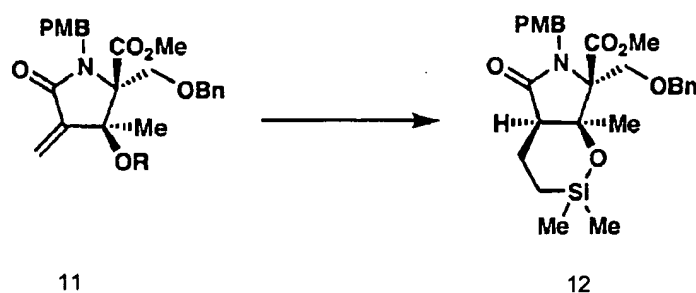
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(g) silylating 9 to produce the silyl ether 11:

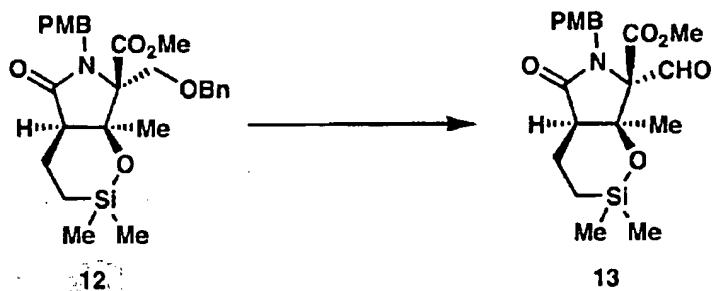


(h) cyclizing 11 to provide the *cis*-fused γ -lactam 12:

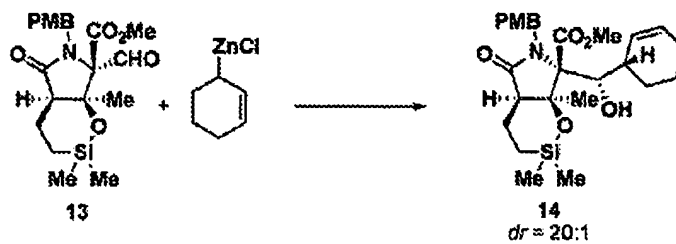


(i) cleaving the protecting group (OBn) in compound 12 to yield the primary alcohol 12a (wherein OBn in 12 is OH), and oxidizing 12a to provide the aldehyde 13:

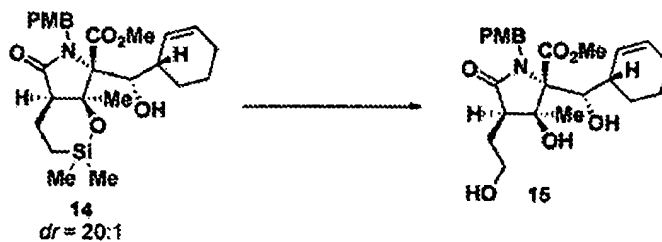
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- (j) reacting 2-cyclo-hexenylzinc chloride with the aldehyde 13 to yield the formyl adduct 14:

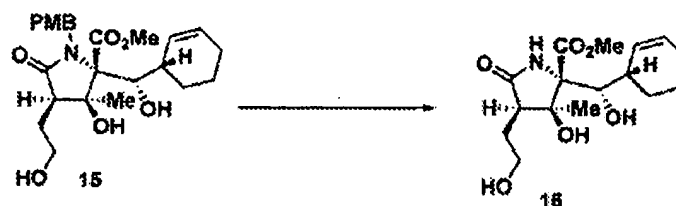


- (k) oxidizing 14 to provide the triol 15:

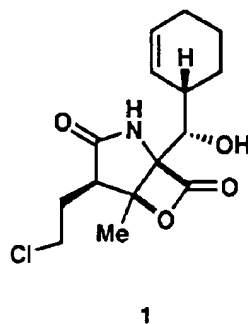
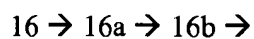


- (l) cleaving the PMB group of 15 to yield the triol ester 16:

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(m) hydrolyzing 16 to the corresponding γ -lactam-carboxylic acid 16a (CO₂Me in 16 is CO₂H), followed by conversion of the acid 16a to the beta-lactone 16b, followed by conversion to salinosporamide A (1):



2. (Original) The intermediate step (b) of Claim 1, namely the deprotonation of 4 followed by alkylation of the resulting enolate to provide 5:



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UNITED STATES DEPARTMENT OF COMMERCE
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 Address: COMMISSIONER FOR PATENTS
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 Alexandria, Virginia 22313-1450
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Bib Data Sheet

CONFIRMATION NO. 8936

SERIAL NUMBER 10/821,621	FILING DATE 04/09/2004 RULE	CLASS 548	GROUP ART UNIT 1626	ATTORNEY DOCKET NO. 004979-00045
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APPLICANTS

Elias J. Corey, Cambridge, MA;

** CONTINUING DATA *****

** FOREIGN APPLICATIONS *****

IF REQUIRED, FOREIGN FILING LICENSE GRANTED
 ** 06/26/2004

Foreign Priority claimed 35 USC 119 (a-d) conditions met	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input checked="" type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Met after Allowance	STATE OR COUNTRY MA	SHEETS DRAWING 1	TOTAL CLAIMS 27	INDEPENDENT CLAIMS 1
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Verified and Acknowledged

Examiner's Signature *[Signature]* Initials *[Initials]*

ADDRESS
 22910
 BANNER & WITCOFF, LTD.
 28 STATE STREET
 28th FLOOR
 BOSTON, MA
 02109-9601

TITLE
 Simple stereocontrolled synthesis of salinosporamide A

FILING FEE RECEIVED 1026	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____
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10/821,621

September 22, 2006

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(FILE 'HOME' ENTERED AT 09:50:44 ON 22 SEP 2006)

FILE 'HCAPLUS' ENTERED AT 09:51:03 ON 22 SEP 2006

E US2004-821621/APPS

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SEL RN

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704910-44-1/BI OR 704910-45-2/BI OR 814-68-6/BI)

FILE 'HCAPLUS' ENTERED AT 09:51:26 ON 22 SEP 2006

L3 1 SEA ABB=ON PLU=ON L1 AND L2
D IALL HITSTR

FILE 'REGISTRY' ENTERED AT 09:52:19 ON 22 SEP 2006

L4 STR
L5 2 SEA SSS SAM L4
D SCA
L6 40 SEA SSS FUL L4

FILE 'HCAPLUS' ENTERED AT 09:55:28 ON 22 SEP 2006

L7 16 SEA ABB=ON PLU=ON L6(L)PREP+NT/RL
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FILE 'REGISTRY' ENTERED AT 09:55:59 ON 22 SEP 2006

L8 STR L4
L9 1 SEA SUB=L6 SSS SAM L8
L10 16 SEA SUB=L6 SSS FUL L8

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SEL RN L7

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10/821,621

September 22, 2006

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L13 4 SEA ABB=ON PLU=ON L12 AND C6/ES AND O>4 AND NR=1 AND N>0
D SCA

FILE 'HCAPLUS' ENTERED AT 10:07:14 ON 22 SEP 2006

L14 7 SEA ABB=ON PLU=ON L13(L) RACT+NT/RL

FILE 'REGISTRY' ENTERED AT 10:07:47 ON 22 SEP 2006

L15 9 SEA ABB=ON PLU=ON L12 AND (C6 AND NCOC2)/ES AND O>3

FILE 'HCAPLUS' ENTERED AT 10:08:18 ON 22 SEP 2006

L16 6 SEA ABB=ON PLU=ON L15(L) RACT+NT/RL AND L15(L) PREP+NT/RL

FILE 'REGISTRY' ENTERED AT 10:08:55 ON 22 SEP 2006

L17 123 SEA ABB=ON PLU=ON C6/ES AND O>4 AND L12

FILE 'HCAPLUS' ENTERED AT 10:09:18 ON 22 SEP 2006

L18 15 SEA ABB=ON PLU=ON L17(L) RACT+NT/RL AND L17(L) PREP+NT/RL

FILE 'REGISTRY' ENTERED AT 10:10:02 ON 22 SEP 2006

L19 144 SEA ABB=ON PLU=ON O>4 AND N>0 AND L12

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L20 119 SEA ABB=ON PLU=ON L19(L) RACT+NT/RL AND L19(L) PREP+NT/RL
S SI/ELS AND L12

FILE 'REGISTRY' ENTERED AT 10:10:54 ON 22 SEP 2006

L21 1262292 SEA ABB=ON PLU=ON SI/ELS

FILE 'HCAPLUS' ENTERED AT 10:10:55 ON 22 SEP 2006

FILE 'REGISTRY' ENTERED AT 10:11:02 ON 22 SEP 2006

L22 30 SEA ABB=ON PLU=ON SI/ELS AND L12

FILE 'HCAPLUS' ENTERED AT 10:11:07 ON 22 SEP 2006

L23 7 SEA ABB=ON PLU=ON L22(L) RACT+NT/RL AND L22(L) PREP+NT/RL

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L24 1 SEA ABB=ON PLU=ON L12 AND ZN/ELS
D SCA

FILE 'HCAPLUS' ENTERED AT 10:11:58 ON 22 SEP 2006

L25 4 SEA ABB=ON PLU=ON L24(L) RACT+NT/RL

FILE 'REGISTRY' ENTERED AT 10:12:23 ON 22 SEP 2006

L26 0 SEA ABB=ON PLU=ON NC4/ELS

L27 1537291 SEA ABB=ON PLU=ON NC4/ES

L28 69 SEA ABB=ON PLU=ON L12 AND L27

FILE 'HCAPLUS' ENTERED AT 10:12:43 ON 22 SEP 2006

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 L25 OR L29)
 L31 8 SEA ABB=ON PLU=ON L30 AND L11
 L32 4 SEA ABB=ON PLU=ON L30 NOT L31
 L33 4 SEA ABB=ON PLU=ON L7 NOT (L30 OR L31)
 L*** DEL 16 S L31 OR L32 OR L33
 L*** DEL 1 S L1 AND L31

FILE 'BEILSTEIN' ENTERED AT 10:15:22 ON 22 SEP 2006

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 SEL L34 BRN
 L35 5 SEA ABB=ON PLU=ON (10187632/RX.PBRN OR 10190531/RX.PBRN OR
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 10193538/RX.PBRN OR 9349224/RX.PBRN)
 L36 5 SEA ABB=ON PLU=ON L35 AND BABSAN/FA
 SEL BABSAN L36 1-5

FILE 'BABS' ENTERED AT 10:17:00 ON 22 SEP 2006

L37 3 SEA ABB=ON PLU=ON (6528037/AN OR 6446758/AN OR 6510529/AN)

FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS' ENTERED AT 10:28:36 ON 22 SEP 2006
 E COREY E/AU

L38 2176 SEA ABB=ON PLU=ON ("COREY E"/AU OR "COREY E J"/AU OR "COREY
 E J AND GREGORY A REICHARD"/AU OR "COREY E JAMES"/AU) OR
 ("COREY ELIAS J"/AU OR "COREY ELIAS J JR"/AU OR "COREY ELIAS
 JAMES"/AU)
 L39 16 SEA ABB=ON PLU=ON L38 AND ?SALINO?
 L40 15 SEA ABB=ON PLU=ON L38 AND ?SPORAMID?
 L41 16 SEA ABB=ON PLU=ON L39 OR L40
 L42 7 DUP REM L41 (9 DUPLICATES REMOVED)
 ANSWERS '1-7' FROM FILE HCAPLUS

FILE 'HCAPLUS' ENTERED AT 10:31:08 ON 22 SEP 2006

D QUE L31

=> fil hcap

FILE 'HCAPLUS' ENTERED AT 10:31:27 ON 22 SEP 2006

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FILE COVERS 1907 - 22 Sep 2006 VOL 145 ISS 14

FILE LAST UPDATED: 21 Sep 2006 (20060921/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d que l3

L1 1 SEA FILE=HCAPLUS ABB=ON PLU=ON (US2004-821621/AP OR US2004-821621/PRN)

L2 23 SEA FILE=REGISTRY ABB=ON PLU=ON (100-07-2/BI OR 112520-99-7/BI OR 16532-02-8/BI OR 3373-59-9/BI OR 3587-60-8/BI OR 437742-34-2/BI OR 704910-28-1/BI OR 704910-29-2/BI OR 704910-30-5/BI OR 704910-31-6/BI OR 704910-32-7/BI OR 704910-33-8/BI OR 704910-34-9/BI OR 704910-35-0/BI OR 704910-36-1/BI OR 704910-37-2/BI OR 704910-38-3/BI OR 704910-39-4/BI OR 704910-41-8/BI OR 704910-42-9/BI OR 704910-44-1/BI OR 704910-45-2/BI OR 814-68-6/BI)

L3 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L1 AND L2

INSTANT APPLICATION

=> d l3 iall hitstr

L3 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:1106831 HCAPLUS Full-text

DOCUMENT NUMBER: 143:386848

ENTRY DATE: Entered STN: 14 Oct 2005

TITLE: Simple stereocontrolled synthesis of salinosporamide A

INVENTOR(S): Corey, Elias J.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 17 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

INT. PATENT CLASSIF.:
MAIN: C07D491-02

US PATENT CLASSIF.: 548453000

CLASSIFICATION: 26-6 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 34

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005228186	A1	20051013	US 2004-821621	20040409 <--
WO 2005113558	A2	20051201	WO 2005-US12218	20050411 <--
WO 2005113558	A3	20051222		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

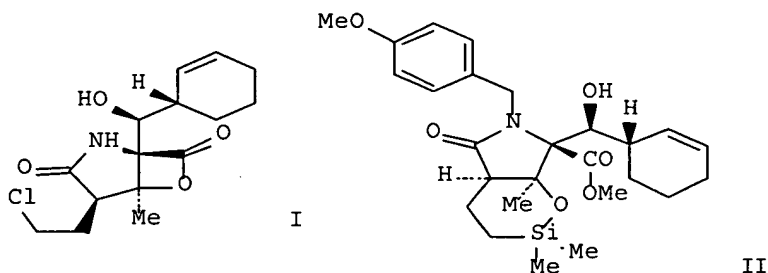
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2004-821621 A 20040409 <--

PATENT CLASSIFICATION CODES:

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

US 2005228186 ICM C07D491-02
 INCL 548453000
 IPCI C07D0491-02 [ICM,7]; C07D0491-00 [ICM,7,C*]
 IPCR C07D0491-00 [I,C*]; C07D0491-02 [I,A]
 NCL 548/453.000
 ECLA C07D207/38; C07D263/16B; C07D491/04+305B+209B
 WO 2005113558 IPCI C07D0491-02 [ICM,7]; C07D0491-00 [ICM,7,C*]
 IPCR C07D0491-00 [I,C*]; C07D0491-02 [I,A]
 ECLA C07D207/38; C07D263/16B; C07D491/04+305B+209B
 OTHER SOURCE(S): CASREACT 143:386848
 GRAPHIC IMAGE:



ABSTRACT:

A simple and effective stereocontrolled synthesis of (-)-salinosporamide A (I) was disclosed. The process, the first total synthesis of salinosporamide A, is capable of providing the compound in substantial quantities for further biol. studies. The disclosed synthetic scheme started from N-(4-methoxybenzoyl)-L-threonine Me ester and included the preparation of several novel synthetic intermediate compds., such as lactam II. Salinosporamide A is a synthetic target of special interest because it has previously shown proteasome inhibiting activity and shown cytotoxic activity in vitro against many tumor cell lines (IC50 values of 10 nM or less).

SUPPL. TERM: salinosporamide A asym synthesis
 INDEX TERM: Asymmetric synthesis and induction
 (asym. synthesis of salinosporamide A)
 INDEX TERM: 100-07-2, 4-Methoxybenzoyl chloride 814-68-6
 , Acryloyl chloride 3373-59-9, L-Threonine methyl ester 3587-60-8 16532-02-8,
 (Bromomethyl)chlorodimethylsilane 112520-99-7
 ROLE: RCT (Reactant); RACT (Reactant or reagent)
 (asym. synthesis of salinosporamide A)
 INDEX TERM: 704910-28-1P, N-(4-Methoxybenzoyl)-L-threonine methyl ester 704910-29-2P 704910-30-5P
 704910-31-6P 704910-32-7P
 704910-33-8P 704910-34-9P
 704910-35-0P 704910-36-1P
 704910-37-2P 704910-38-3P
 704910-39-4P 704910-41-8P
 704910-42-9P 704910-44-1P
 704910-45-2P
 ROLE: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (asym. synthesis of salinosporamide A)

10/821,621

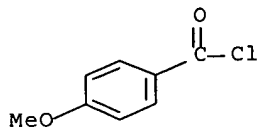
September 22, 2006

INDEX TERM: 437742-34-2P

ROLE: SPN (Synthetic preparation); PREP (Preparation)
(asym. synthesis of salinosporamide A)IT 100-07-2, 4-Methoxybenzoyl chloride 814-68-6, Acryloyl
chloride 3373-59-9, L-Threonine methyl ester 3587-60-8
16532-02-8, (Bromomethyl)chlorodimethylsilane 112520-99-7RL: RCT (Reactant); RACT (Reactant or reagent)
(asym. synthesis of salinosporamide A)

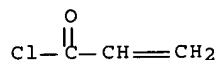
RN 100-07-2 HCAPLUS

CN Benzoyl chloride, 4-methoxy- (9CI) (CA INDEX NAME)



RN 814-68-6 HCAPLUS

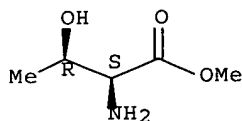
CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



RN 3373-59-9 HCAPLUS

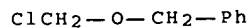
CN L-Threonine, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



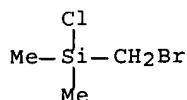
RN 3587-60-8 HCAPLUS

CN Benzene, [(chloromethoxy)methyl]- (9CI) (CA INDEX NAME)



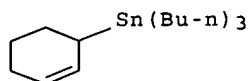
RN 16532-02-8 HCAPLUS

CN Silane, (bromomethyl)chlorodimethyl- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 112520-99-7 HCAPLUS

CN Stannane, tributyl-2-cyclohexen-1-yl- (9CI) (CA INDEX NAME)



IT 704910-28-1P, N-(4-Methoxybenzoyl)-L-threonine methyl ester

704910-29-2P 704910-30-5P 704910-31-6P

704910-32-7P 704910-33-8P 704910-34-9P

704910-35-0P 704910-36-1P 704910-37-2P

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704910-42-9P 704910-44-1P 704910-45-2P

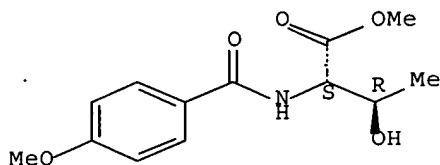
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(asym. synthesis of salinosporamide A)

RN 704910-28-1 HCAPLUS

CN L-Threonine, N-(4-methoxybenzoyl)-, methyl ester (9CI) (CA INDEX NAME)

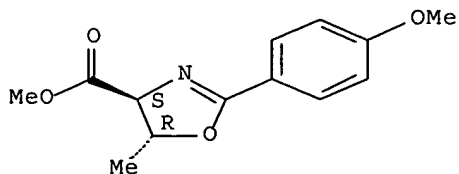
Absolute stereochemistry.



RN 704910-29-2 HCAPLUS

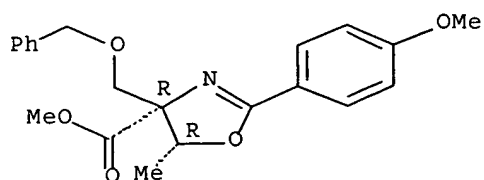
CN 4-Oxazolecarboxylic acid, 4,5-dihydro-2-(4-methoxyphenyl)-5-methyl-, methyl ester, (4S,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



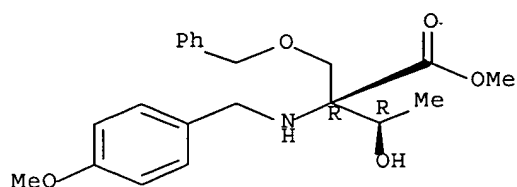
RN 704910-30-5 HCAPLUS
 CN 4-Oxazolecarboxylic acid, 4,5-dihydro-2-(4-methoxyphenyl)-5-methyl-4-
 [(phenylmethoxy)methyl]-, methyl ester, (4R,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



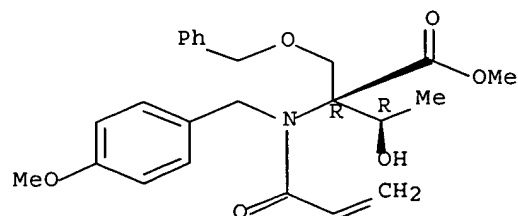
RN 704910-31-6 HCAPLUS
 CN D-Isovaline, 3-hydroxy-N-[(4-methoxyphenyl)methyl]-2'-(phenylmethoxy)-,
 methyl ester, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



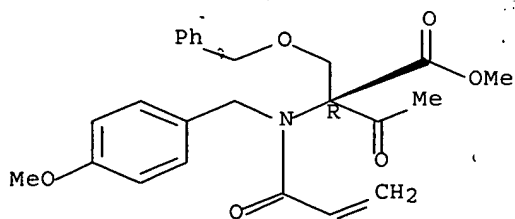
RN 704910-32-7 HCAPLUS
 CN D-Isovaline, 3-hydroxy-N-[(4-methoxyphenyl)methyl]-N-(1-oxo-2-propenyl)-2'-(
 phenylmethoxy)-, methyl ester, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 704910-33-8 HCAPLUS
 CN D-Isovaline, N-[(4-methoxyphenyl)methyl]-3-oxo-N-(1-oxo-2-propenyl)-2'-(
 phenylmethoxy)-, methyl ester (9CI) (CA INDEX NAME)

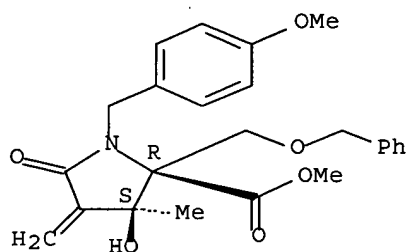
Absolute stereochemistry. Rotation (-).



RN 704910-34-9 HCAPLUS

CN D-Proline, 3-hydroxy-1-[(4-methoxyphenyl)methyl]-3-methyl-4-methylene-5-oxo-2-[(phenylmethoxy)methyl]-, methyl ester, (3S)-(9CI) (CA INDEX NAME)

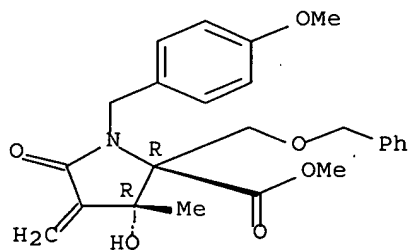
Absolute stereochemistry. Rotation (-).



RN 704910-35-0 HCAPLUS

CN D-Proline, 3-hydroxy-1-[(4-methoxyphenyl)methyl]-3-methyl-4-methylene-5-oxo-2-[(phenylmethoxy)methyl]-, methyl ester, (3R)-(9CI) (CA INDEX NAME)

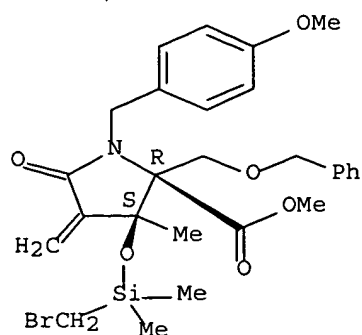
Absolute stereochemistry. Rotation (-).



RN 704910-36-1 HCAPLUS

CN D-Proline, 3-[[[(bromomethyl)dimethylsilyl]oxy]-1-[(4-methoxyphenyl)methyl]-3-methyl-4-methylene-5-oxo-2-[(phenylmethoxy)methyl]-, methyl ester, (3S)-(9CI) (CA INDEX NAME)

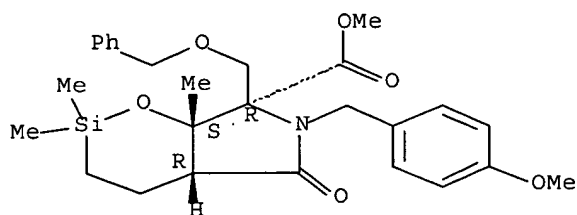
Absolute stereochemistry. Rotation (-).



RN 704910-37-2 HCAPLUS

CN 1,2-Oxasilino[5,6-c]pyrrole-7-carboxylic acid, octahydro-6-[(4-methoxyphenyl)methyl]-2,2,7a-trimethyl-5-oxo-7-[(phenylmethoxy)methyl]-, methyl ester, (4aR,7R,7aS)- (9CI) (CA INDEX NAME)

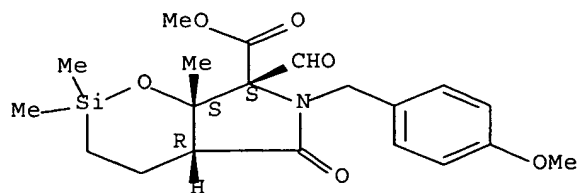
Absolute stereochemistry. Rotation (-).



RN 704910-38-3 HCAPLUS

CN 1,2-Oxasilino[5,6-c]pyrrole-7-carboxylic acid, 7-formyloctahydro-6-[(4-methoxyphenyl)methyl]-2,2,7a-trimethyl-5-oxo-, methyl ester, (4aR,7S,7aS)- (9CI) (CA INDEX NAME)

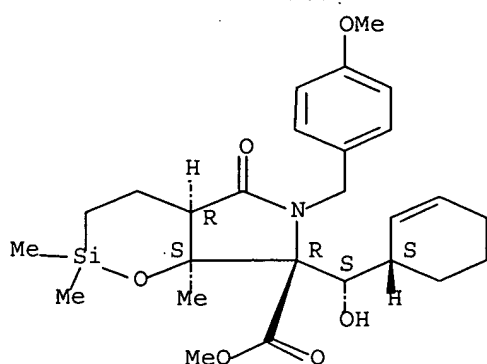
Absolute stereochemistry. Rotation (-).



RN 704910-39-4 HCAPLUS

CN 1,2-Oxasilino[5,6-c]pyrrole-7-carboxylic acid, 7-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]octahydro-6-[(4-methoxyphenyl)methyl]-2,2,7a-trimethyl-5-oxo-, methyl ester, (4aR,7R,7aS)- (9CI) (CA INDEX NAME)

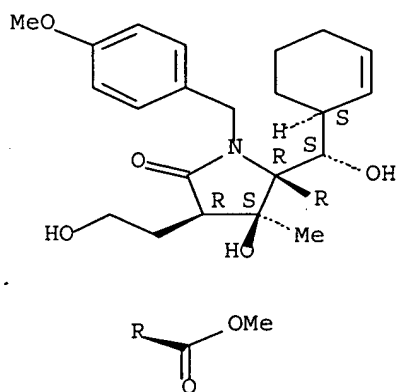
Absolute stereochemistry. Rotation (-).



RN 704910-41-8 HCAPLUS

CN D-Proline, 2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-3-hydroxy-4-(2-hydroxyethyl)-1-[(4-methoxyphenyl)methyl]-3-methyl-5-oxo-, methyl ester, (3S,4R)- (9CI) (CA INDEX NAME)

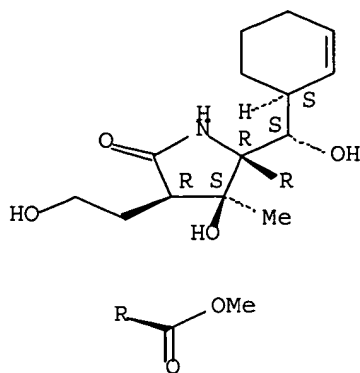
Absolute stereochemistry. Rotation (+).



RN 704910-42-9 HCAPLUS

CN D-Proline, 2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-3-hydroxy-4-(2-hydroxyethyl)-3-methyl-5-oxo-, methyl ester, (3S,4R)- (9CI) (CA INDEX NAME)

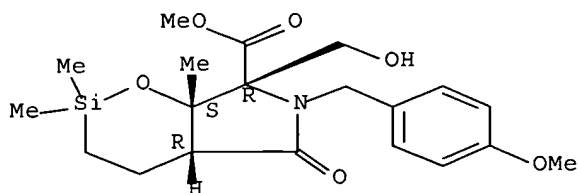
Absolute stereochemistry. Rotation (+).



RN 704910-44-1 HCAPLUS

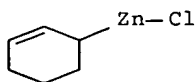
CN 1,2-Oxasilino[5,6-c]pyrrole-7-carboxylic acid, octahydro-7-(hydroxymethyl)-6-[(4-methoxyphenyl)methyl]-2,2,7a-trimethyl-5-oxo-, methyl ester, (4aR,7R,7aS)-(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 704910-45-2 HCAPLUS

CN Zinc, chloro-2-cyclohexen-1-yl- (9CI) (CA INDEX NAME)



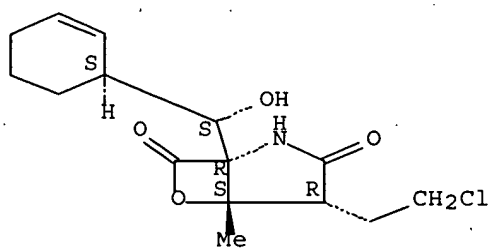
IT 437742-34-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
(asym. synthesis of salinosporamide A)

RN 437742-34-2 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(S)-[(1S)-2-cyclohexen-1-yl]hydroxymethyl]-5-methyl-, (1R,4R,5S)-(9CI) (CA INDEX NAME)

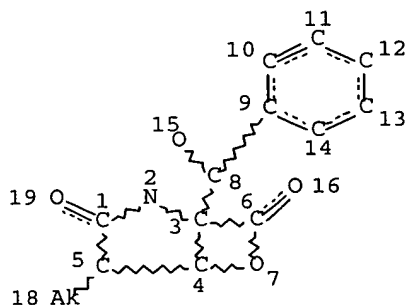
Absolute stereochemistry. Rotation (-).



PRIOR ART SEARCH

=> d que 131

L4 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

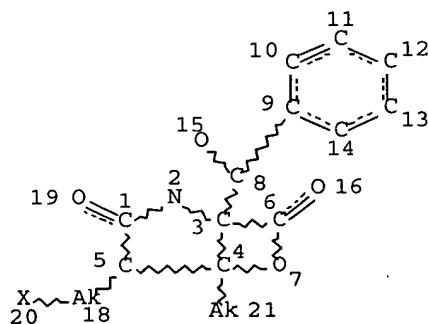
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STEREO ATTRIBUTES: NONE

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L8 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

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NUMBER OF NODES IS 20

STEREO ATTRIBUTES: NONE

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=> d l31 ibib abs hitstr 1-8

L31 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2006:544606 HCAPLUS Full-text
 DOCUMENT NUMBER: 145:45846

10/821,621

September 22, 2006

TITLE: Preparation of salinosporamide A and analogous bicyclic β -lactones for use in anti-cancer pharmaceutical compositions

INVENTOR(S): Palladino, Michael; Potts, Barbara Christine; Macherla, Venkata Rami Reddy; Neuteboom, Saskia Theodora Cornelia

PATENT ASSIGNEE(S): Nereus Pharmaceuticals, Inc., USA

SOURCE: PCT Int. Appl., 282 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

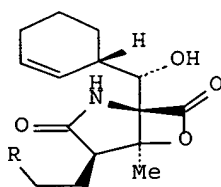
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006060809	A2	20060608	WO 2005-US44091	20051202
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PRIORITY APPLN. INFO.:

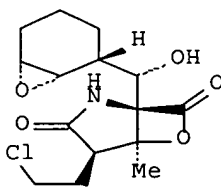
US 2004-633379P	P	20041203
US 2005-643922P	P	20050113
US 2005-658884P	P	20050304
US 2005-676533P	P	20050429

OTHER SOURCE(S): MARPAT 145:45846

GI



I



II

AB Salinosporamide A I (R = Cl) and its analogs were prepared for therapeutic use in the treatment of cancer, inflammatory conditions, and/or infectious disease. I was prepared via a fermentation process using strain CNB476 or strain NPS21184. I and related bicyclic β -lactones recovered from the fermentation process were subsequently converted to other β -lactone derivs., such as I (R = H, Br, iodo, Me) and II. The prepared β -lactones were extensively tested for anticancer, anti-inflammatory and antibacterial activity.

IT 823229-34-1P 823229-42-1P 872360-17-3P

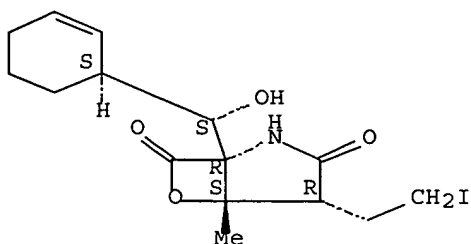
RL: BPN (Biosynthetic preparation); PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation)

; THU (Therapeutic use); BIOL (Biological study); -PREP
 (Preparation); RACT (Reactant or reagent); USES (Uses)
 (preparation of salinosporamide A and analogous [3.2.0] bicyclic
 β -lactones for use in anti-cancer pharmaceutical compns.)

RN 823229-34-1 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-(2-iodoethyl)-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

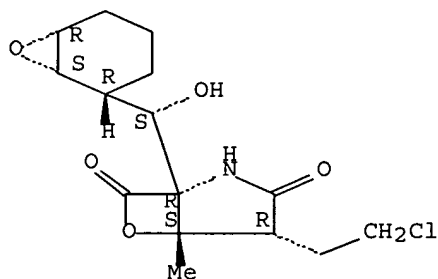
Absolute stereochemistry.



RN 823229-42-1 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(S)-hydroxy(1S,2R,6R)-7-oxabicyclo[4.1.0]hept-2-ylmethyl]-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

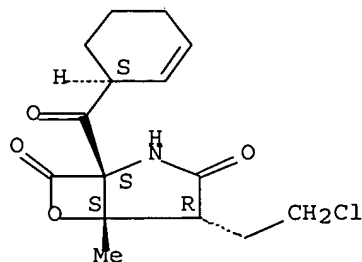
Absolute stereochemistry.



RN 872360-17-3 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(1S)-2-cyclohexen-1-ylcarbonyl]-5-methyl-, (1S,4R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



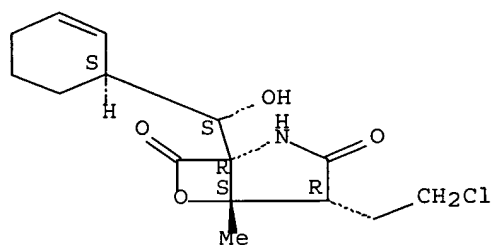
IT 437742-34-2P, Salinosporamide A 863126-95-8P
872360-15-1P

RL: BPN (Biosynthetic preparation); PAC (Pharmacological activity); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of salinosporamide A and analogous [3.2.0] bicyclic β -lactones for use in anti-cancer pharmaceutical compns.)

RN 437742-34-2 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(S)-[(1S)-2-cyclohexen-1-yl]hydroxymethyl]-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

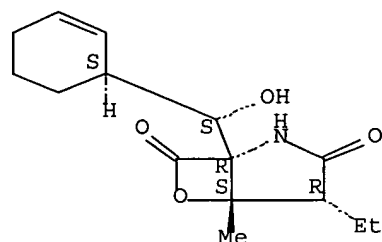
Absolute stereochemistry. Rotation (-).



RN 863126-95-8 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-[(1S)-2-cyclohexen-1-yl]hydroxymethyl]-4-ethyl-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

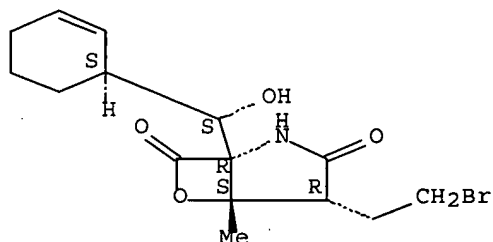
Absolute stereochemistry. Rotation (-).



RN 872360-15-1 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-bromoethyl)-1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



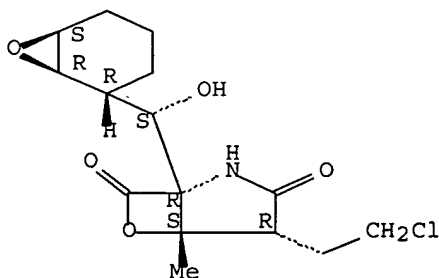
IT 823229-44-3P 823229-46-5P 823229-54-5P
823229-56-7P 872360-18-4P 872360-19-5P
872360-20-8P 872360-21-9P 872360-22-0P
872360-23-1P 872360-24-2P 872360-25-3P
872360-26-4P 872360-27-5P 872360-28-6P
872360-29-7P 872360-30-0P 872360-31-1P

RL: BPN (Biosynthetic preparation); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of salinosporamide A and analogous [3.2.0] bicyclic β -lactones for use in anti-cancer pharmaceutical compns.)

RN 823229-44-3 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(S)-hydroxy(1R,2R,6S)-7-oxabicyclo[4.1.0]hept-2-ylmethyl]-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

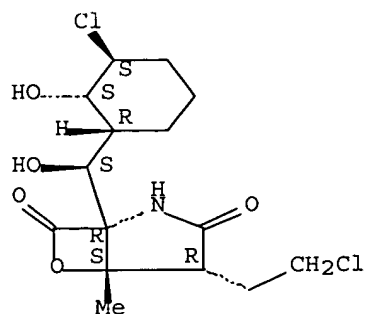
Absolute stereochemistry.



RN 823229-46-5 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(S)-[(1R,2S,3S)-3-chloro-2-hydroxycyclohexyl]hydroxymethyl]-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

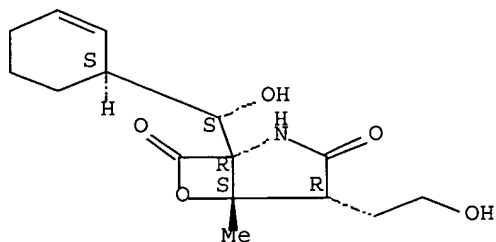
Absolute stereochemistry.



RN 823229-54-5 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-(2-hydroxyethyl)-5-methyl-, (1R,4R,5S)-(9CI) (CA INDEX NAME)

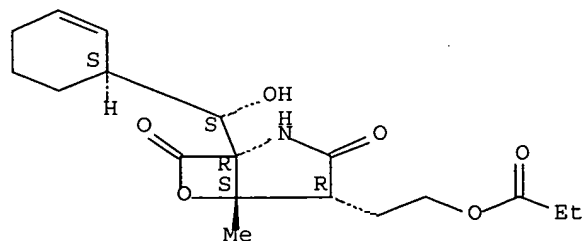
Absolute stereochemistry.



RN 823229-56-7 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-5-methyl-4-[2-(1-oxopropoxy)ethyl]-, (1R,4R,5S)-(9CI) (CA INDEX NAME)

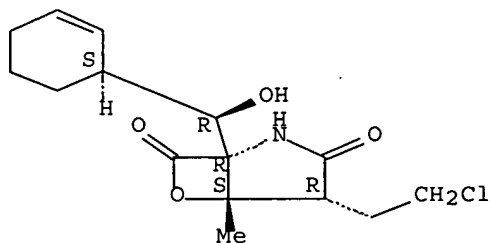
Absolute stereochemistry.



RN 872360-18-4 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(R)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-5-methyl-, (1R,4R,5S)-(9CI) (CA INDEX NAME)

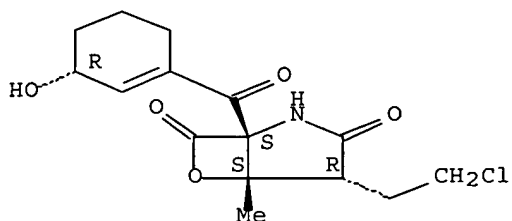
Absolute stereochemistry.



RN 872360-19-5 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[[3-(3-hydroxy-1-cyclohexen-1-yl)carbonyl]-5-methyl-, (1S,4R,5S)-(9CI) (CA INDEX NAME)

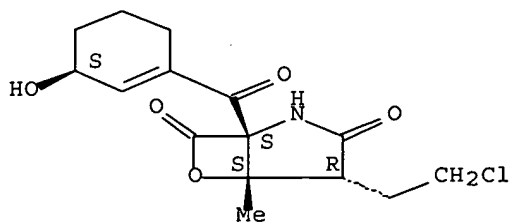
Absolute stereochemistry.



RN 872360-20-8 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[[3-(3S)-3-hydroxy-1-cyclohexen-1-yl]carbonyl]-5-methyl-, (1S,4R,5S)-(9CI) (CA INDEX NAME)

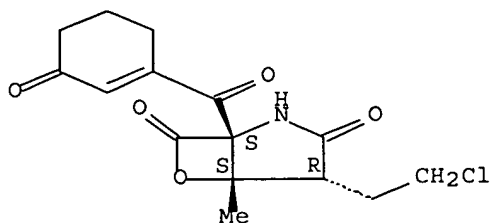
Absolute stereochemistry.



RN 872360-21-9 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-5-methyl-1-[[3-oxo-1-cyclohexen-1-yl]carbonyl]-, (1S,4R,5S)-(9CI) (CA INDEX NAME)

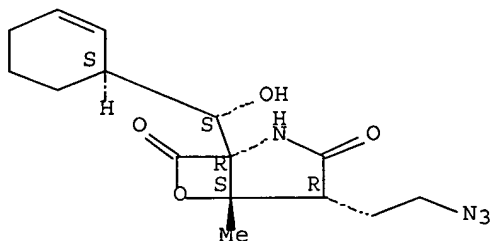
Absolute stereochemistry.



RN 872360-22-0 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

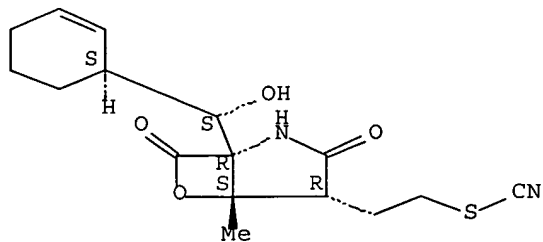
Absolute stereochemistry.



RN 872360-23-1 HCAPLUS

CN Thiocyanic acid, 2-[(1R,4R,5S)-1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-5-methyl-3,7-dioxo-6-oxa-2-azabicyclo[3.2.0]hept-4-yl]ethyl ester (9CI) (CA INDEX NAME)

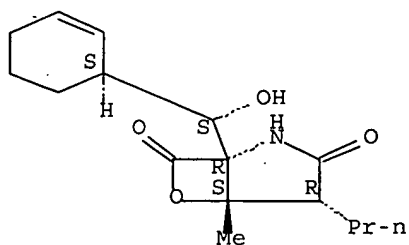
Absolute stereochemistry.



RN 872360-24-2 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-5-methyl-4-propyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

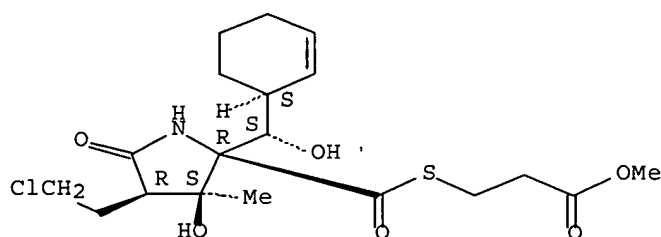
Absolute stereochemistry.



RN 872360-25-3 HCAPLUS

CN Propanoic acid, 3-[[[(2R,3S,4R)-4-(2-chloroethyl)-2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-3-hydroxy-3-methyl-5-oxo-2-pyrrolidinyl]carbonyl]thio]-, methyl ester (9CI) (CA INDEX NAME)

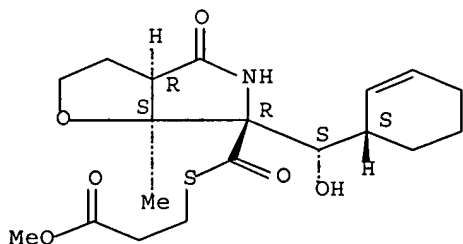
Absolute stereochemistry.



RN 872360-26-4 HCAPLUS

CN Propanoic acid, 3-[[[(3aR,6R,6aS)-6-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]hexahydro-6a-methyl-4-oxo-2H-furo[2,3-c]pyrrol-6-yl]carbonyl]thio]-, methyl ester (9CI) (CA INDEX NAME)

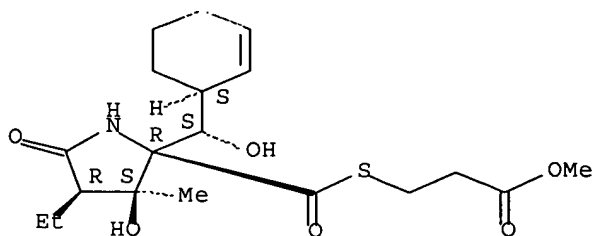
Absolute stereochemistry.



RN 872360-27-5 HCAPLUS

CN Propanoic acid, 3-[[[(2R,3S,4R)-2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-ethyl-3-hydroxy-3-methyl-5-oxo-2-pyrrolidinyl]carbonyl]thio]-, methyl ester (9CI) (CA INDEX NAME)

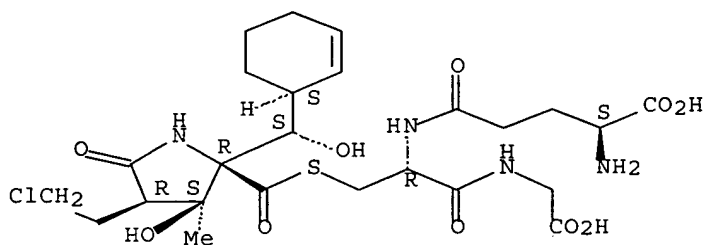
Absolute stereochemistry.



RN 872360-28-6 HCAPLUS

CN Glycine, L-γ-glutamyl-S-[(3S,4R)-4-(2-chloroethyl)-2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-3-hydroxy-3-methyl-5-oxo-D-prolyl]-L-cysteinyl- (9CI) (CA INDEX NAME)

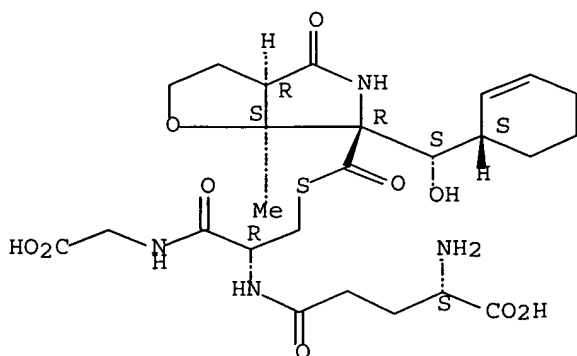
Absolute stereochemistry.



RN 872360-29-7 HCAPLUS

CN Glycine, L-γ-glutamyl-S-[(3aR,6R,6aS)-6-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]hexahydro-6a-methyl-4-oxo-2H-furo[2,3-c]pyrrole-6-carbonyl]-L-cysteinyl- (9CI) (CA INDEX NAME)

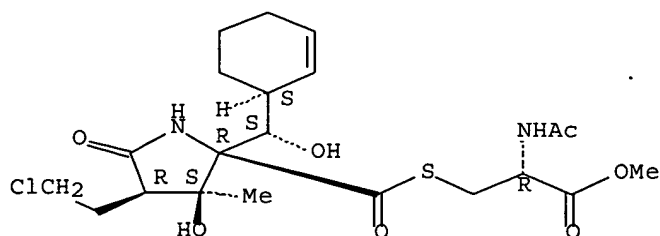
Absolute stereochemistry.



RN 872360-30-0 HCAPLUS

CN L-Cysteine, N-acetyl-S-[(3S,4R)-4-(2-chloroethyl)-2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-3-hydroxy-3-methyl-5-oxo-D-prolyl]-, methyl ester (9CI) (CA INDEX NAME)

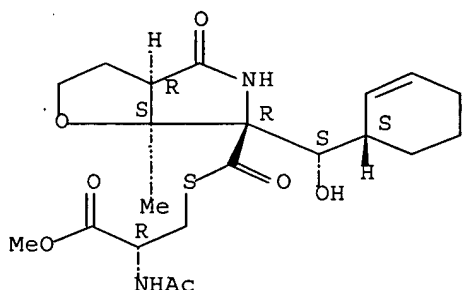
Absolute stereochemistry.



RN 872360-31-1 HCAPLUS

CN L-Cysteine, N-acetyl-S-[[(3aR,6R,6aS)-6-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]hexahydro-6a-methyl-4-oxo-2H-furo[2,3-c]pyrrol-6-yl]carbonyl]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 823229-26-1P 872360-11-7P 872360-12-8P

872360-13-9P 872360-16-2P

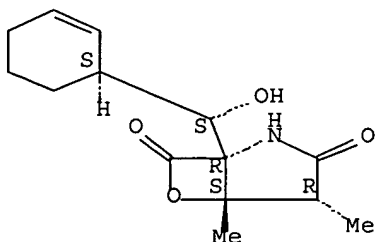
RL: BPN (Biosynthetic preparation); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of salinosporamide A and analogous [3.2.0] bicyclic β -lactones for use in anti-cancer pharmaceutical compns.)

RN 823229-26-1 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4,5-dimethyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

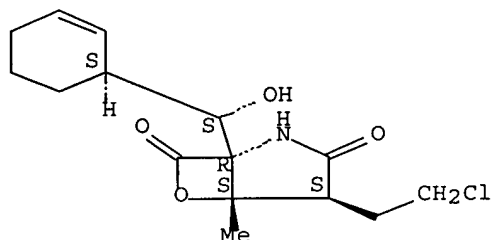
Absolute stereochemistry.



RN 872360-11-7 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-5-methyl-, (1R,4S,5S)- (9CI) (CA INDEX NAME)

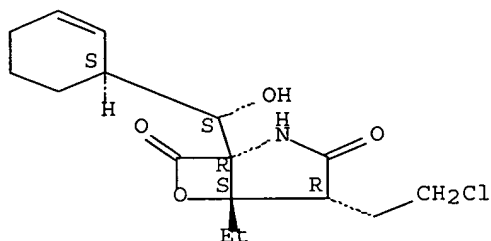
Absolute stereochemistry.



RN 872360-12-8 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-5-ethyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

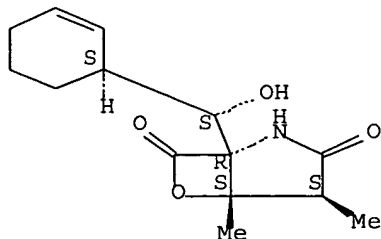
Absolute stereochemistry.



RN 872360-13-9 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4,5-dimethyl-, (1R,4S,5S)- (9CI) (CA INDEX NAME)

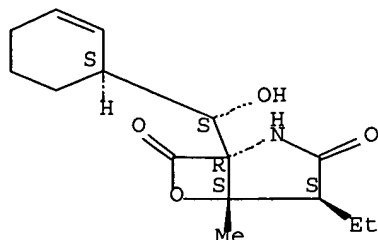
Absolute stereochemistry.



RN 872360-16-2 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-ethyl-5-methyl-, (1R,4S,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 70-18-8, Glutathione, reactions

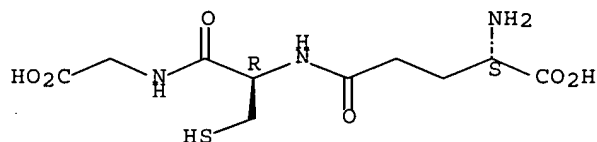
RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of salinosporamide A and analogous [3.2.0] bicyclic β -lactones for use in anti-cancer pharmaceutical compns.)

RN 70-18-8 HCAPLUS

CN Glycine, L- γ -glutamyl-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2006:529516 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 145:188596

TITLE: Studies toward the synthesis of salinosporamide A, a potent proteasome inhibitor

AUTHOR(S): Caubert, Virginie; Langlois, Nicole

CORPORATE SOURCE: Institut de Chimie des Substances Naturelles, CNRS, Gif-sur-Yvette, 91198, Fr.

SOURCE: Tetrahedron Letters (2006), 47(26), 4473-4475

CODEN: TELEAY; ISSN: 0040-4039

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB An α -methylenepyrrolidinone bearing all the functionalities and relative configurations of an advanced intermediate in the synthesis of salinosporamide A and analogs was synthesized from Me pyroglutamate through regio- and stereoselective N-methylnitrone cycloaddn.

IT 437742-34-2P, Salinosporamide A

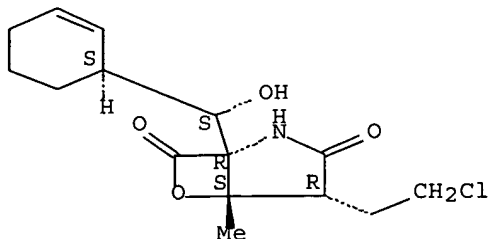
RL: PNU (Preparation, unclassified); PREP (Preparation)

(preparation of methylenepyrrolidinone as salinosporamide A precursor from pyroglutamate by regio- and stereoselective nitrone cycloaddn.)

RN 4377-2-34-2 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4 (2-chloroethyl)-1-[(S)-[(1S)-2-cyclohexen-1-yl]hydroxymethyl]-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



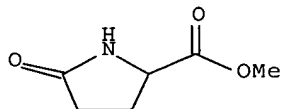
IT 54571-66-3, DL-Methyl pyroglutamate

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of methylenepyrrolidinone as salinosporamide A precursor from pyroglutamate by regio- and stereoselective nitronc cycloaddn.)

RN 54571-66-3 HCAPLUS

CN Proline, 5-oxo-, methyl ester (9CI) (CA INDEX NAME)



IT 903528-00-7P 903528-01-8P 903528-02-9P

903528-03-0P 903528-04-1P 903528-05-2P

903528-06-3P 903528-08-5P 903528-09-6P

903528-11-0P

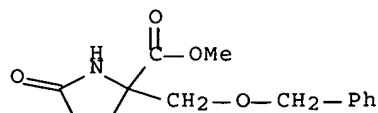
RL: RCT (Reactant); SPN (Synthetic preparation);

PREP (Preparation); RACT (Reactant or reagent)

(preparation of methylenepyrrolidinone as salinosporamide A precursor from pyroglutamate by regio- and stereoselective nitronc cycloaddn.)

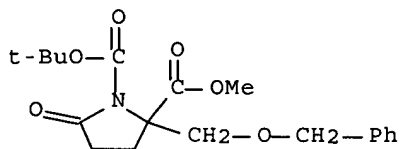
RN 903528-00-7 HCAPLUS

CN Proline, 5-oxo-2-[(phenylmethoxy)methyl]-, methyl ester (9CI) (CA INDEX NAME)



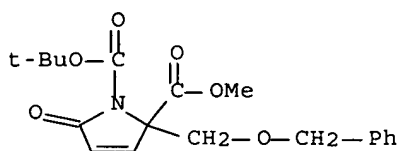
RN 903528-01-8 HCAPLUS

CN 1,2-Pyrrolidinedicarboxylic acid, 5-oxo-2-[(phenylmethoxy)methyl]-, 1-(1,1-dimethylethyl) 2-methyl ester (9CI) (CA INDEX NAME)



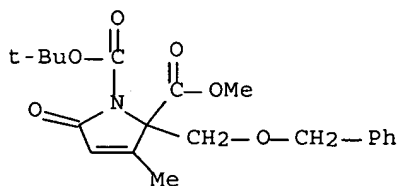
RN 903528-02-9 HCAPLUS

CN 1H-Pyrrole-1,2-dicarboxylic acid, 2,5-dihydro-5-oxo-2-
[(phenylmethoxy)methyl]-, 1-(1,1-dimethylethyl) 2-methyl ester (9CI) (CA
INDEX NAME)



RN 903528-03-0 HCAPLUS

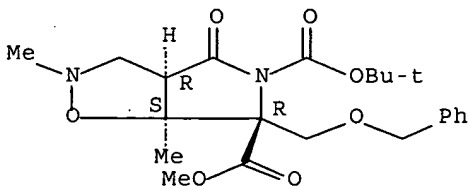
CN 1H-Pyrrole-1,2-dicarboxylic acid, 2,5-dihydro-3-methyl-5-oxo-2-
[(phenylmethoxy)methyl]-, 1-(1,1-dimethylethyl) 2-methyl ester (9CI) (CA
INDEX NAME)



RN 903528-04-1 HCAPLUS

CN INDEX NAME NOT YET ASSIGNED

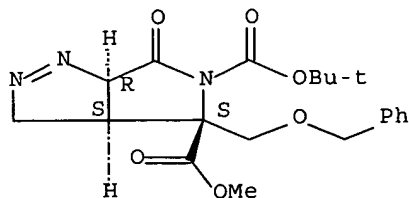
Relative stereochemistry.



RN 903528-05-2 HCAPLUS

CN Pyrrolo[3,4-c]pyrazole-4,5(3H)-dicarboxylic acid, 3a,4,6,6a-tetrahydro-6-oxo-4-[(phenylmethoxy)methyl]-, 5-(1,1-dimethylethyl) 4-methyl ester, (3aR,4R,6aS)-rel- (9CI) (CA INDEX NAME)

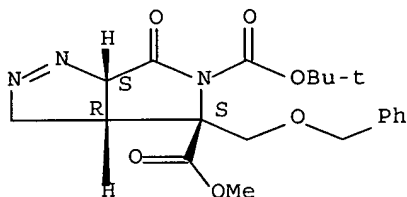
Relative stereochemistry.



RN 903528-06-3 HCAPLUS

CN Pyrrolo[3,4-c]pyrazole-4,5(3H)-dicarboxylic acid, 3a,4,6,6a-tetrahydro-6-oxo-4-[(phenylmethoxy)methyl]-, 5-(1,1-dimethylethyl) 4-methyl ester, (3aR,4S,6aS)-rel- (9CI) (CA INDEX NAME)

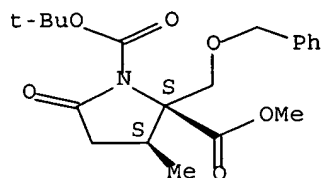
Relative stereochemistry.



RN 903528-08-5 HCAPLUS

CN 1,2-Pyrrolidinedicarboxylic acid, 3-methyl-5-oxo-2-[(phenylmethoxy)methyl]-, 1-(1,1-dimethylethyl) 2-methyl ester, (2R,3R)-rel- (9CI) (CA INDEX NAME)

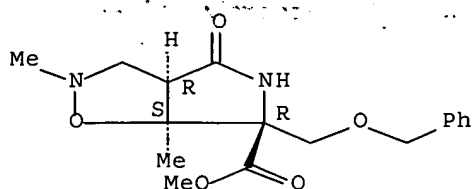
Relative stereochemistry.



RN 903528-09-6 HCAPLUS

CN INDEX NAME NOT YET ASSIGNED

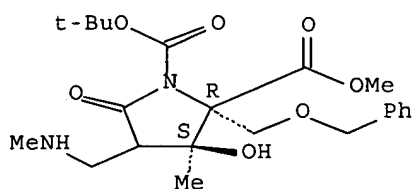
Relative stereochemistry.



RN 903528-11-0 HCAPLUS

CN 1,2-Pyrrolidinedicarboxylic acid, 3-hydroxy-3-methyl-4-
[(methylamino)methyl]-5-oxo-2-[(phenylmethoxy)methyl]-,
1-(1,1-dimethylethyl) 2-methyl ester, (2R,3S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



IT 903527-99-1P 903528-07-4P 903528-10-9P

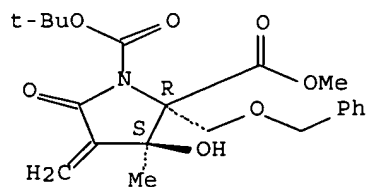
RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of methylenepyrrolidinone as salinosporamide A precursor from
pyroglutamate by regio- and stereoselective nitron cycloaddn.)

RN 903527-99-1 HCAPLUS

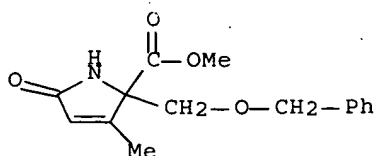
CN 1,2-Pyrrolidinedicarboxylic acid, 3-hydroxy-3-methyl-4-methylene-5-oxo-2-
[(phenylmethoxy)methyl]-, 1-(1,1-dimethylethyl) 2-methyl ester,
(2R,3S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



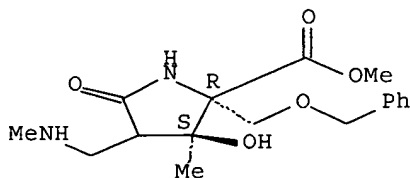
RN 903528-07-4 HCAPLUS

CN 1H-Pyrrole-2-carboxylic acid, 2,5-dihydro-3-methyl-5-oxo-2-
[(phenylmethoxy)methyl]-, methyl ester (9CI) (CA INDEX NAME)



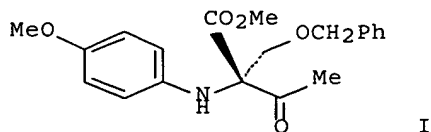
RN 903528-10-9 HCAPLUS
 CN D-Proline, 3-hydroxy-3-methyl-4-[(methylamino)methyl]-5-oxo-2-
 [(phenylmethoxy)methyl]-, methyl ester, (3S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2006:274086 HCAPLUS Full-text
 DOCUMENT NUMBER: 145:7903
 TITLE: Novel Bicyclization Reaction Leading to a Fused
 β -Lactone
 AUTHOR(S): Reddy, Leleti Rajender; Corey, E. J.
 CORPORATE SOURCE: Harvard University, Cambridge, MA, 02138, USA
 SOURCE: Organic Letters (2006), 8(8), 1717-1719
 CODEN: ORLEF7; ISSN: 1523-7060
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 GI



AB The reaction of acryloyl chloride with the amino ketone I in the presence of
 pyridine produces bicyclic β -lactones rather than the corresponding
 acrylamide, which can be the major product under other conditions and which is
 an intermediate for the synthesis of salinosporamide A.
 IT 704910-33-8P

RL: BYP (Byproduct); SPN (Synthetic preparation);

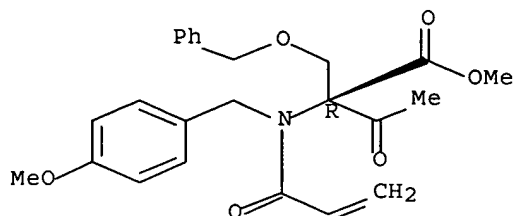
PREP (Preparation)

(novel bicyclization reaction leading to a fused β -lactone)

RN 704910-33-8 HCAPLUS

CN D-Isovaline, N-[(4-methoxyphenyl)methyl]-3-oxo-N-(1-oxo-2-propenyl)-2'-(phenylmethoxy)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT 437742-34-2P, Salinosporamide A

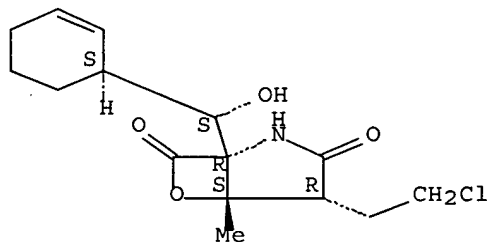
RL: PNU (Preparation, unclassified); PREP (Preparation)

(novel bicyclization reaction leading to a fused β -lactone)

RN 437742-34-2 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(S)-[(1S)-2-cyclohexen-1-yl]hydroxymethyl]-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT 887776-08-1P

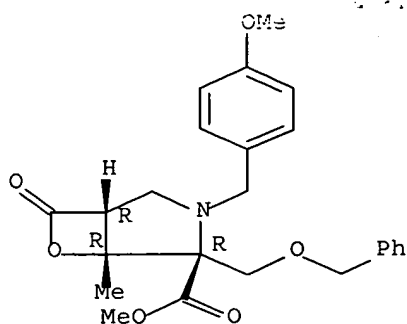
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(novel bicyclization reaction leading to a fused β -lactone)

RN 887776-08-1 HCAPLUS

CN 6-Oxa-3-azabicyclo[3.2.0]heptane-4-carboxylic acid, 3-[(4-methoxyphenyl)methyl]-5-methyl-7-oxo-4-[(phenylmethoxy)methyl]-, methyl ester, (1R,4R,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT 887776-07-0

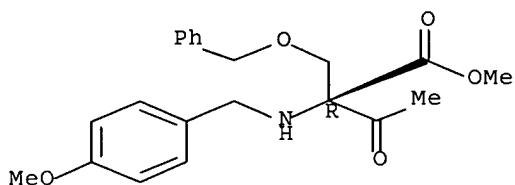
RL: RCT (Reactant); RACT (Reactant or reagent)

(novel bicyclization reaction leading to a fused β -lactone)

RN 887776-07-0 HCAPLUS

CN D-Isovaline, N-[(4-methoxyphenyl)methyl]-3-oxo-2'-(phenylmethoxy)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 887776-09-2P

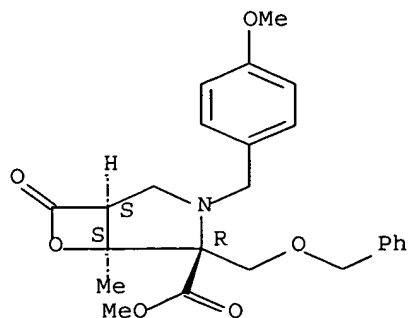
RL: SPN (Synthetic preparation); PREP (Preparation)

(novel bicyclization reaction leading to a fused β -lactone)

RN 887776-09-2 HCAPLUS

CN 6-Oxa-3-azabicyclo[3.2.0]heptane-4-carboxylic acid, 3-[(4-methoxyphenyl)methyl]-5-methyl-7-oxo-4-[(phenylmethoxy)methyl]-, methyl ester, (1S,4R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT:

6

THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:1348855 HCAPLUS Full-text

DOCUMENT NUMBER: 144:81222

TITLE: Preparation of [3.2.0] heterocyclic compounds and treatment methods of using the same

INVENTOR(S): Potts, Barbara Christine; Macherla, Venkat; Mitchell, Scott Sherman; Manam, Ram Rao; Reed, Katherine; Lam, Kin Sing; Neuteboom, Saskia; Chao, Ta-Hsiang; Nicholson, Benjamin; Billstrom, Cheryl

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 94 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

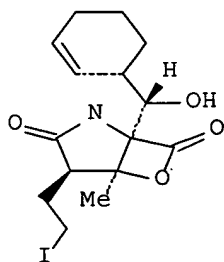
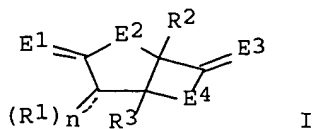
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005288352	A1	20051229	US 2005-118260	20050429
WO 2006028525	A2	20060316	WO 2005-US14846	20050429
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

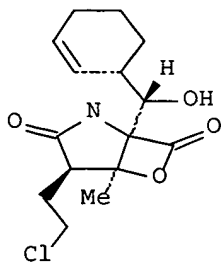
PRIORITY APPLN. INFO.:	US 2004-567336P	P	20040430
	US 2004-580838P	P	20040618
	US 2004-591190P	P	20040726
	US 2004-627462P	P	20041112
	US 2005-644132P	P	20050113
	US 2005-659385P	P	20050304

OTHER SOURCE(S): MARPAT 144:81222

GI



II



III

AB [3.2.0]-Bicycloheptanes I [R1 = H, halo, (un)substituted alkyl, etc.; R2 = H, halo, (un)substituted alkyl, alkenyl, etc.; R3 = halo, (un)substituted aryl, cycloalkyl, etc.; E1-4 independently = (un)substituted heteroatom; with provisions] and derivs. thereof, are prepared and disclosed as having anti-cancer, anti-inflammatory, and anti-microbial properties. Thus, e.g., II was prepared by iodination of fermentation product III. In assays of growth inhibition of human multiple myeloma, II for example demonstrated EC50 values (nM) of 5.9 and 3.2 resp. against RPMI 8226 and U266 cell lines. Pharmaceutical compns. comprising such compds. and methods of treating cancer, inflammatory conditions, and microbial infections with the disclosed compds. or the disclosed pharmaceutical compns. are also disclosed.

IT 872360-16-2P

RL: BPN (Biosynthetic preparation); BIOL (Biological study);

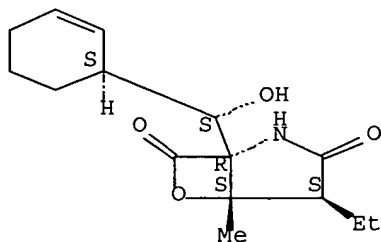
PREP (Preparation)

(preparation and MSBAR of oxazabicycloheptanes obtained via fermentation process for treatment of cancer, inflammatory conditions, and microbial infections)

RN 872360-16-2 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-ethyl-5-methyl-, (1R,4S,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 872360-11-7P

RL: BPN (Biosynthetic preparation); PAC (Pharmacological

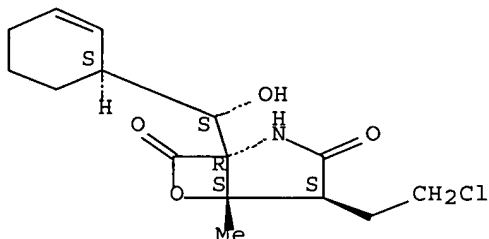
activity); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation and MSBAR of oxaazabicycloheptanes obtained via fermentation process for treatment of cancer, inflammatory conditions, and microbial infections).

RN 872360-11-7 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-5-methyl-, (1R,4S,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 823229-42-1P 872360-17-3P 872360-18-4P
872360-28-6P

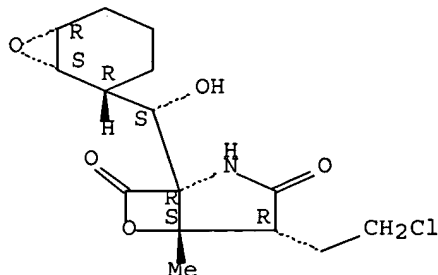
RL: BPN (Biosynthetic preparation); PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation and MSBAR of oxaazabicycloheptanes obtained via fermentation process for treatment of cancer, inflammatory conditions, and microbial infections)

RN 823229-42-1 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(S)-hydroxy(1S,2R,6R)-7-oxabicyclo[4.1.0]hept-2-ylmethyl]-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

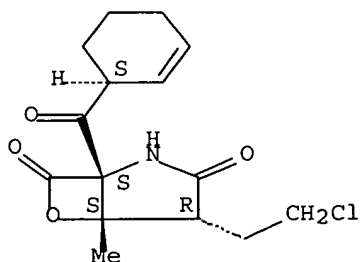
Absolute stereochemistry.



RN 872360-17-3 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(1S)-2-cyclohexen-1-ylcarbonyl]-5-methyl-, (1S,4R,5S)- (9CI) (CA INDEX NAME)

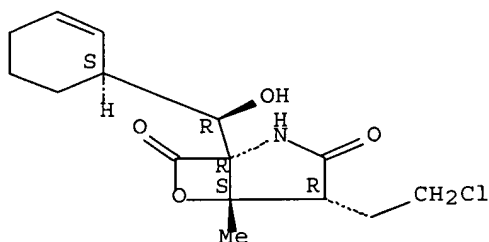
Absolute stereochemistry



RN 872360-18-4 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(R)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

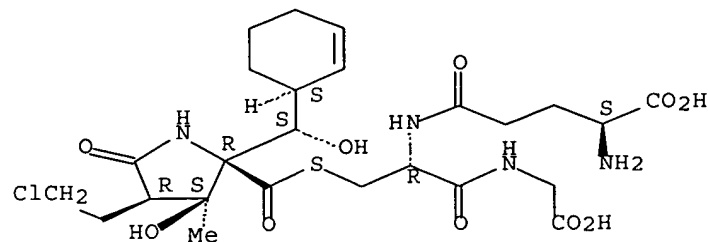
Absolute stereochemistry.



RN 872360-28-6 HCAPLUS

CN Glycine, L-γ-glutamyl-S-[(3S,4R)-4-(2-chloroethyl)-2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-3-hydroxy-3-methyl-5-oxo-D-prolyl]-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 872360-15-1P

RL: BPN (Biosynthetic preparation); PAC (Pharmacological activity); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation and MSBAR of oxaazabicycloheptanes obtained via fermentation)

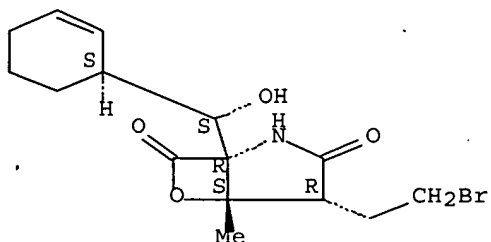
process

for treatment of cancer, inflammatory conditions, and microbial infections)

RN 872360-15-1 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-bromoethyl)-1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 823229-34-1P 823229-44-3P 823229-46-5P

823229-54-5P 823229-56-7P 872360-19-5P

872360-20-8P 872360-22-0P 872360-23-1P

872360-24-2P 872360-25-3P 872360-26-4P

872360-27-5P 872360-30-0P

RL: BPN (Biosynthetic preparation); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use);

BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation and MSBAR of oxaazabicycloheptanes obtained via fermentation

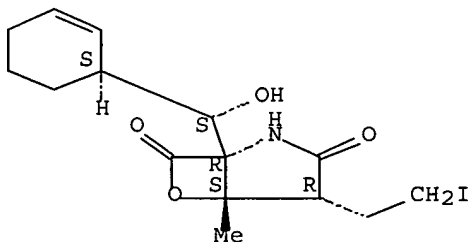
process

for treatment of cancer, inflammatory conditions, and microbial infections)

RN 823229-34-1 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-(2-iodoethyl)-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

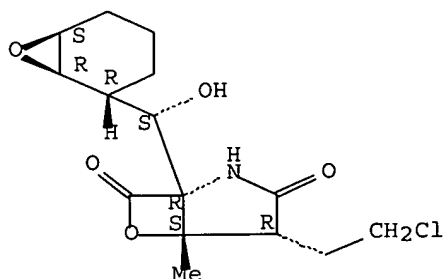
Absolute stereochemistry.



RN 823229-44-3 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(S)-hydroxy(1R,2R,6S)-7-oxabicyclo[4.1.0]hept-2-ylmethyl]-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

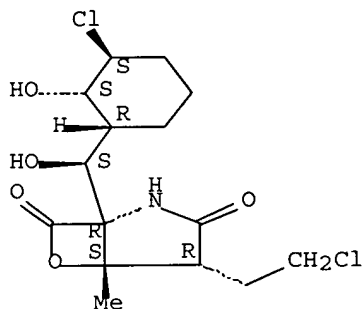
Absolute stereochemistry.



RN 823229-46-5 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(S)-[(1R,2S,3S)-3-chloro-2-hydroxycyclohexyl]hydroxymethyl]-5-methyl-, (1R,4R,5S)-(9CI) (CA INDEX NAME)

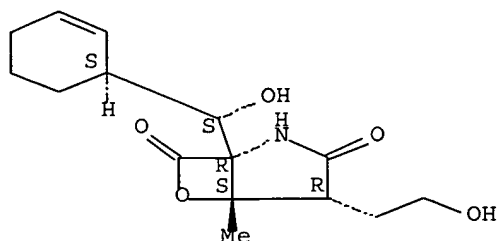
Absolute stereochemistry.



RN 823229-54-5 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(1S)-2-cyclohexen-1-yl]hydroxymethyl]-4-(2-hydroxyethyl)-5-methyl-, (1R,4R,5S)-(9CI) (CA INDEX NAME)

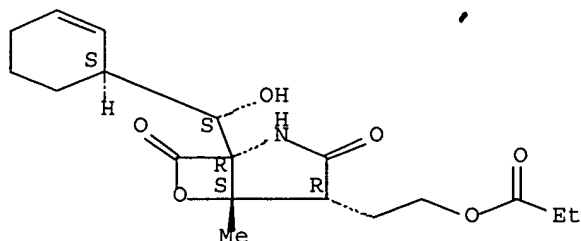
Absolute stereochemistry.



RN 823229-56-7 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(1S)-2-cyclohexen-1-yl]hydroxymethyl]-5-methyl-4-[2-(1-oxopropoxy)ethyl]-, (1R,4R,5S)-(9CI) (CA INDEX NAME)

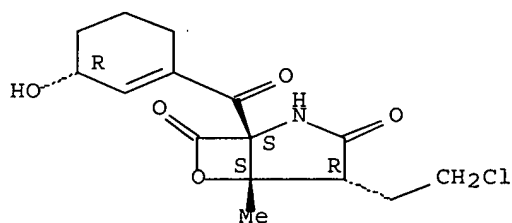
Absolute stereochemistry.



RN 872360-19-5 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[[[(3R)-3-hydroxy-1-cyclohexen-1-yl]carbonyl]-5-methyl-, (1S,4R,5S)- (9CI) (CA INDEX NAME)

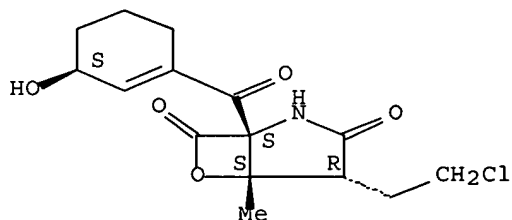
Absolute stereochemistry.



RN 872360-20-8 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[[[(3S)-3-hydroxy-1-cyclohexen-1-yl]carbonyl]-5-methyl-, (1S,4R,5S)- (9CI) (CA INDEX NAME)

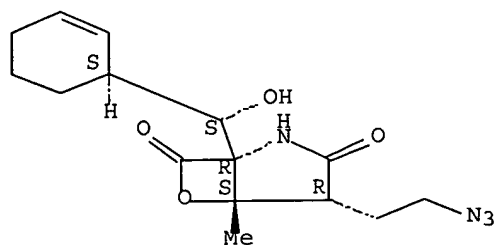
Absolute stereochemistry.



RN 872360-22-0 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-azidoethyl)-1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

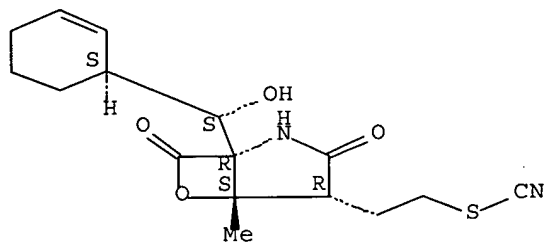
Absolute stereochemistry.



RN 872360-23-1 HCAPLUS

CN Thiocyanic acid, 2-[(1R,4R,5S)-1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-5-methyl-3,7-dioxo-6-oxa-2-azabicyclo[3.2.0]hept-4-yl]ethyl ester (9CI)
(CA INDEX NAME)

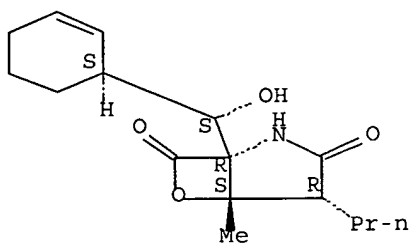
Absolute stereochemistry.



RN 872360-24-2 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-5-methyl-4-propyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

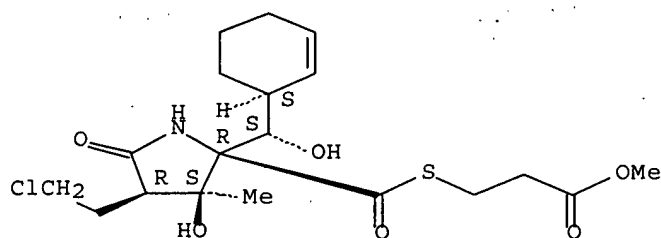
Absolute stereochemistry.



RN 872360-25-3 HCAPLUS

CN Propanoic acid, 3-[[[(2R,3S,4R)-4-(2-chloroethyl)-2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-3-hydroxy-3-methyl-5-oxo-2-pyrrolidinyl]carbonyl]thio]-, methyl ester (9CI) (CA INDEX NAME)

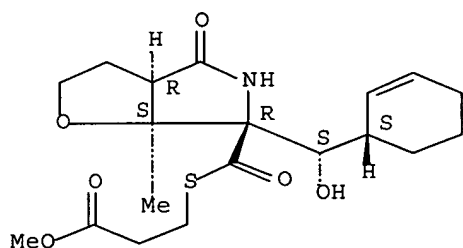
Absolute stereochemistry.



RN 872360-26-4 HCAPLUS

CN Propanoic acid, 3-[[[(3aR,6R,6aS)-6-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]hexahydro-6a-methyl-4-oxo-2H-furo[2,3-c]pyrrol-6-yl]carbonyl]thio]-, methyl ester (9CI) (CA INDEX NAME)

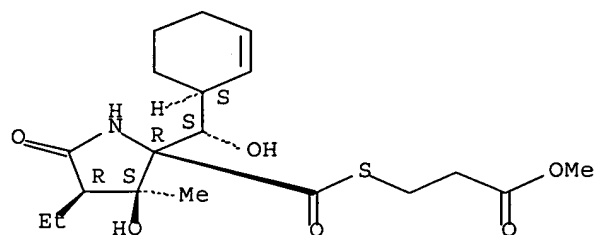
Absolute stereochemistry.



RN 872360-27-5 HCAPLUS

CN Propanoic acid, 3-[[[(2R,3S,4R)-2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-ethyl-3-hydroxy-3-methyl-5-oxo-2-pyrrolidinyl]carbonyl]thio]-, methyl ester (9CI) (CA INDEX NAME)

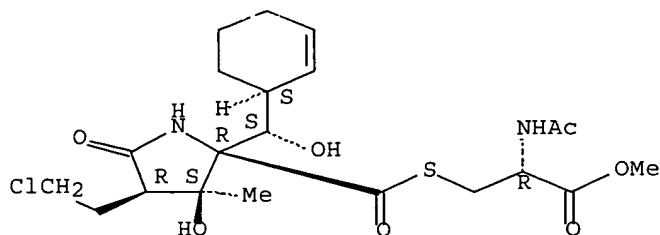
Absolute stereochemistry.



RN 872360-30-0 HCAPLUS

CN L-Cysteine, N-acetyl-S-[(3S,4R)-4-(2-chloroethyl)-2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-3-hydroxy-3-methyl-5-oxo-D-prolyl]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 823229-26-1P 872360-12-8P 872360-13-9P

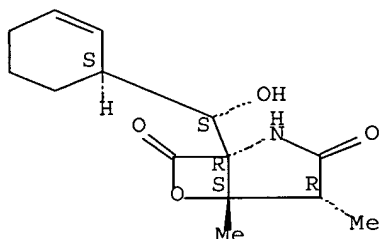
RL: BPN (Biosynthetic preparation); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation and MSBAR of oxaazabicycloheptanes obtained via fermentation process for treatment of cancer, inflammatory conditions, and microbial infections)

RN 823229-26-1 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4,5-dimethyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

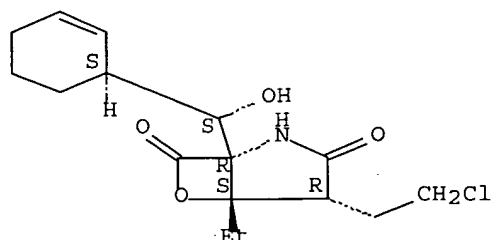
Absolute stereochemistry.



RN 872360-12-8 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-5-ethyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

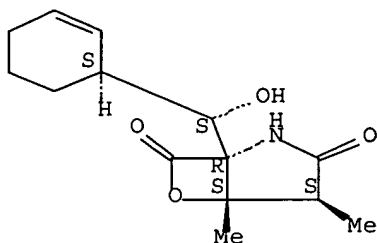
Absolute stereochemistry.



RN 872360-13-9 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-[(1S)-2-cyclohexen-1-yl]hydroxymethyl]-4,5-dimethyl-, (1R,4S,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 437742-34-2P 863126-95-8P

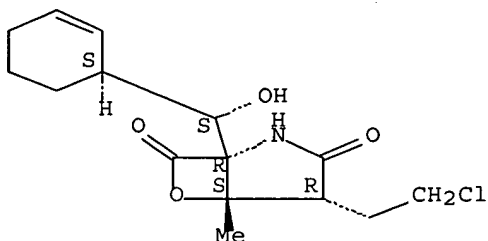
RL: BPN (Biosynthetic preparation); RCT (Reactant); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)

(preparation and MSBAR of oxaazabicycloheptanes obtained via fermentation process for treatment of cancer, inflammatory conditions, and microbial infections)

RN 437742-34-2 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(S)-[(1S)-2-cyclohexen-1-yl]hydroxymethyl]-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

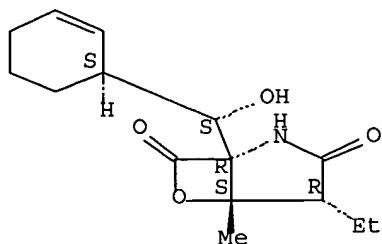
Absolute stereochemistry. Rotation (-).



RN 863126-95-8 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-[(1S)-2-cyclohexen-1-yl]hydroxymethyl]-4-ethyl-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT 872360-21-9P 872360-29-7P 872360-31-1P

RL: BPN (Biosynthetic preparation); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

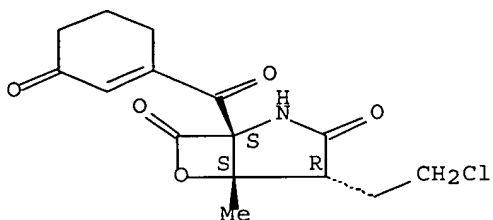
(preparation and MSBAR of oxaazabicycloheptanes obtained via fermentation process

for treatment of cancer, inflammatory conditions, and microbial infections)

RN 872360-21-9 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-5-methyl-1-[(3-oxo-1-cyclohexen-1-yl)carbonyl]-, (1S,4R,5S)- (9CI) (CA INDEX NAME)

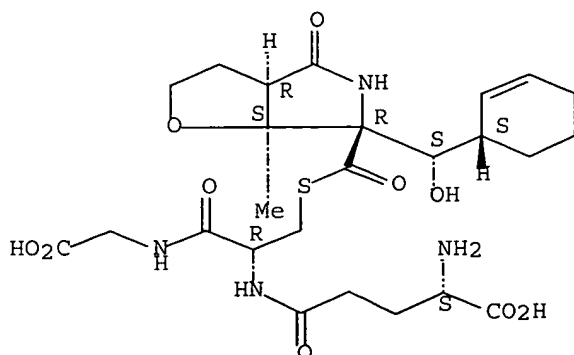
Absolute stereochemistry.



RN 872360-29-7 HCAPLUS

CN Glycine, L-γ-glutamyl-S-[(3aR,6R,6aS)-6-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]hexahydro-6a-methyl-4-oxo-2H-furo[2,3-c]pyrrole-6-carbonyl]-L-cysteinyl- (9CI) (CA INDEX NAME)

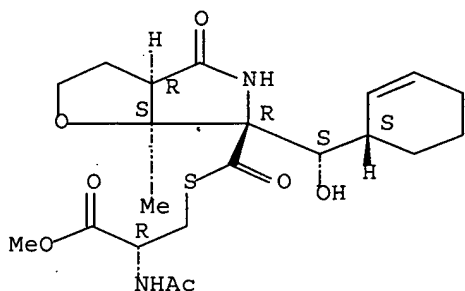
Absolute stereochemistry.



RN 872360-31-1 HCAPLUS

CN L-Cysteine, N-acetyl-S-[[[(3aR,6R,6aS)-6-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]hexahydro-6a-methyl-4-oxo-2H-furo[2,3-c]pyrrol-6-yl]carbonyl]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 70-18-8, Glutathione, reactions

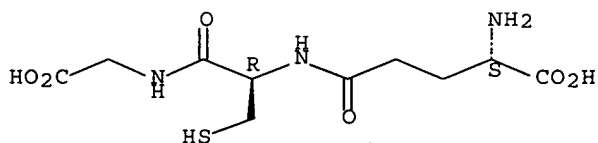
RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation and MSBAR of oxaazabicycloheptanes obtained via fermentation process for treatment of cancer, inflammatory conditions, and microbial infections)

RN 70-18-8 HCAPLUS

CN Glycine, L-γ-glutamyl-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:1154365 HCAPLUS Full-text

DOCUMENT NUMBER: 143:422201

TITLE: Preparation of salinosporamide A for use in anticancer pharmaceutical compositions as proteasome inhibitors

INVENTOR(S): Corey, Elias J.

PATENT ASSIGNEE(S): President and Fellows of Harvard College, USA

SOURCE: PCT Int. Appl., 66 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

WO 2005099687 A2 20051027 WO 2005-US12113 20050411
 WO 2005099687 A3 20051229

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

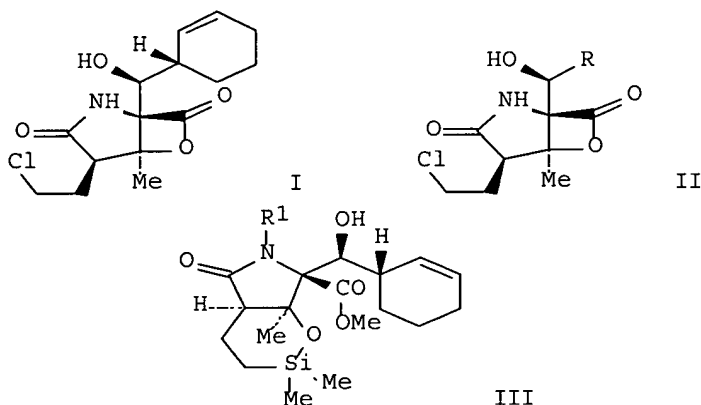
US 2004-560877P

P 20040409

OTHER SOURCE(S):

MARPAT 143:422201

GI



AB Salinosporamide A (I) and its analogs, such as II (R = alkyl, alkenyl, etc.), were enantioselectively synthesized starting from N-(4-methoxybenzoyl)-L-threonine Me ester via several novel synthetic intermediates, such as lactam II (R1 = CH₂C₆H₄-4-OMe). The compds. of this invention have been shown to inhibit the proteasome, an intracellular enzyme complex that destroys proteins the cell no longer needs. Without the proteasome, proteins would build up and clog cellular machinery. Fast-growing cancer cells make especially heavy use of the proteasome, so thwarting its action is a compelling drug strategy.

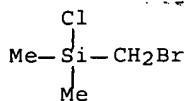
IT 16532-02-8, (Bromomethyl)chlorodimethylsilane 704910-28-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of salinosporamide A for use in anticancer pharmaceutical compns. as proteasome inhibitors)

RN 16532-02-8 HCAPLUS

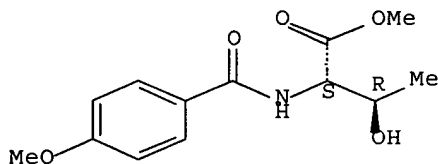
CN Silane, (bromomethyl)chlorodimethyl- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 704910-28-1 HCAPLUS

CN L-Threonine, N-(4-methoxybenzoyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 704910-29-2P 704910-30-5P 704910-31-6P

704910-32-7P 704910-33-8P 704910-34-9P

704910-35-0P 704910-36-1P 704910-37-2P

704910-38-3P 704910-39-4P 704910-41-8P

704910-42-9P 704910-43-0P 704910-44-1P

704910-45-2P 857311-65-0P 857681-75-5P

857681-76-6P 857681-77-7P 857681-80-2P

857681-81-3P 857681-82-4P 857681-83-5P

860453-67-4P 860453-68-5P 860453-69-6P

860453-70-9P 860453-71-0P 860453-72-1P

860453-75-4P 860453-76-5P 860453-77-6P

RL: RCT (Reactant); SPN (Synthetic preparation);

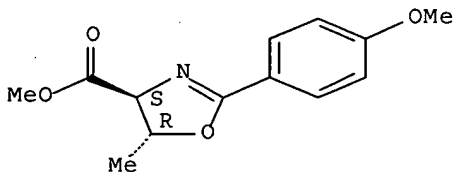
PREP (Preparation); RACT (Reactant or reagent)

(preparation of salinosporamide A for use in anticancer pharmaceutical compns. as proteasome inhibitors)

RN 704910-29-2 HCAPLUS

CN 4-Oxazolecarboxylic acid, 4,5-dihydro-2-(4-methoxyphenyl)-5-methyl-, methyl ester, (4S,5R)- (9CI) (CA INDEX NAME)

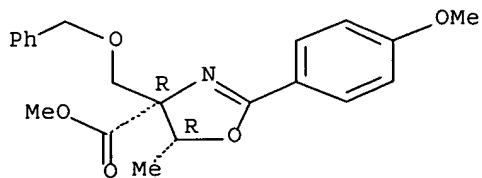
Absolute stereochemistry. Rotation (+).



RN 704910-30-5 HCAPLUS

CN 4-Oxazolecarboxylic acid, 4,5-dihydro-2-(4-methoxyphenyl)-5-methyl-4-[(phenylmethoxy)methyl]-, methyl ester, (4R,5R)- (9CI) (CA INDEX NAME)

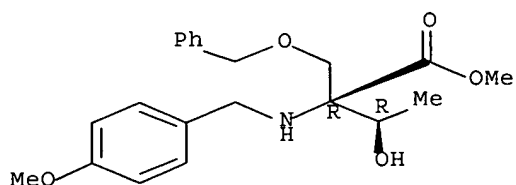
Absolute stereochemistry. Rotation (-).



RN 704910-31-6 HCAPLUS

CN D-Isovaline, 3-hydroxy-N-[(4-methoxyphenyl)methyl]-2'-(phenylmethoxy)-, methyl ester, (3R)- (9CI) (CA INDEX NAME)

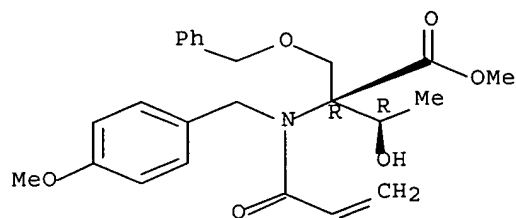
Absolute stereochemistry. Rotation (-).



RN 704910-32-7 HCAPLUS

CN D-Isovaline, 3-hydroxy-N-[(4-methoxyphenyl)methyl]-N-(1-oxo-2-propenyl)-2'-(phenylmethoxy)-, methyl ester, (3R)- (9CI) (CA INDEX NAME)

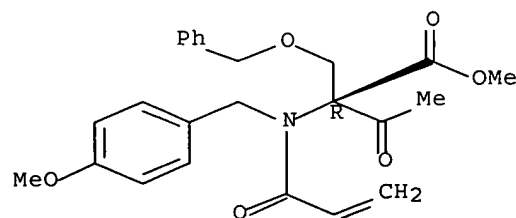
Absolute stereochemistry. Rotation (-).



RN 704910-33-8 HCAPLUS

CN D-Isovaline, N-[(4-methoxyphenyl)methyl]-3-oxo-N-(1-oxo-2-propenyl)-2'-(phenylmethoxy)-, methyl ester (9CI) (CA INDEX NAME)

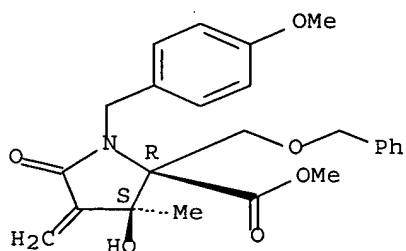
Absolute stereochemistry. Rotation (-).



RN 704910-34-9 HCAPLUS

CN D-Proline, 3-hydroxy-1-[(4-methoxyphenyl)methyl]-3-methyl-4-methylene-5-oxo-2-[(phenylmethoxy)methyl]-, methyl ester, (3S)- (9CI) (CA INDEX NAME)

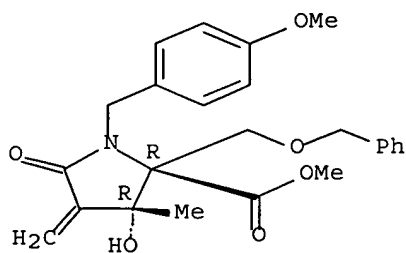
Absolute stereochemistry. Rotation (-).



RN 704910-35-0 HCAPLUS

CN D-Proline, 3-hydroxy-1-[(4-methoxyphenyl)methyl]-3-methyl-4-methylene-5-oxo-2-[(phenylmethoxy)methyl]-, methyl ester, (3R)- (9CI) (CA INDEX NAME)

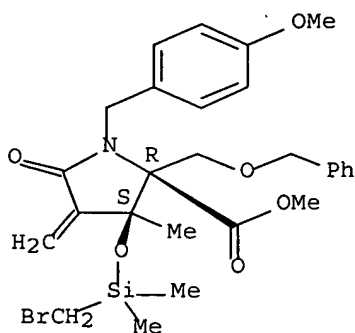
Absolute stereochemistry. Rotation (-).



RN 704910-36-1 HCAPLUS

CN D-Proline, 3-[[[(bromomethyl)dimethylsilyl]oxy]-1-[(4-methoxyphenyl)methyl]-3-methyl-4-methylene-5-oxo-2-[(phenylmethoxy)methyl]-, methyl ester, (3S)- (9CI) (CA INDEX NAME)

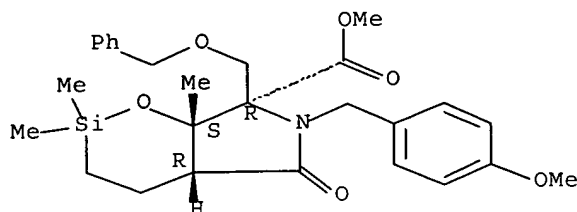
Absolute stereochemistry. Rotation (-).



RN 704910-37-2 HCAPLUS

CN 1,2-Oxasilino[5,6-c]pyrrole-7-carboxylic acid, octahydro-6-[(4-methoxyphenyl)methyl]-2,2,7a-trimethyl-5-oxo-7-[(phenylmethoxy)methyl]-, methyl ester, (4aR,7R,7aS)-(9CI) (CA INDEX NAME)

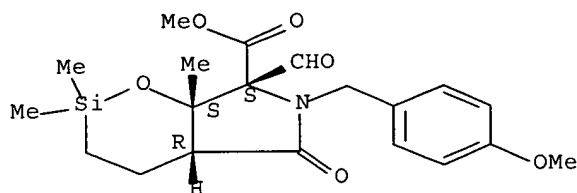
Absolute stereochemistry. Rotation (-).



RN 704910-38-3 HCAPLUS

CN 1,2-Oxasilino[5,6-c]pyrrole-7-carboxylic acid, 7-formyloctahydro-6-[(4-methoxyphenyl)methyl]-2,2,7a-trimethyl-5-oxo-, methyl ester, (4aR,7S,7aS)-(9CI) (CA INDEX NAME)

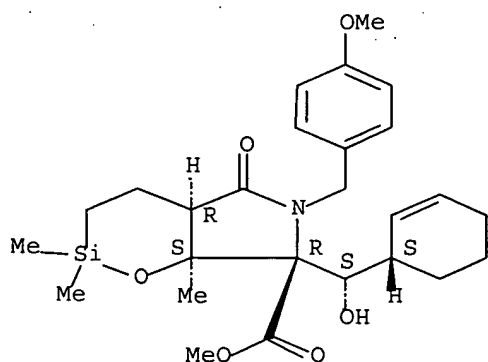
Absolute stereochemistry. Rotation (-).



RN 704910-39-4 HCAPLUS

CN 1,2-Oxasilino[5,6-c]pyrrole-7-carboxylic acid, 7-[(S)-(1S)-2-cyclohexen-1-yl]hydroxymethyl]octahydro-6-[(4-methoxyphenyl)methyl]-2,2,7a-trimethyl-5-oxo-, methyl ester, (4aR,7R,7aS)-(9CI) (CA INDEX NAME)

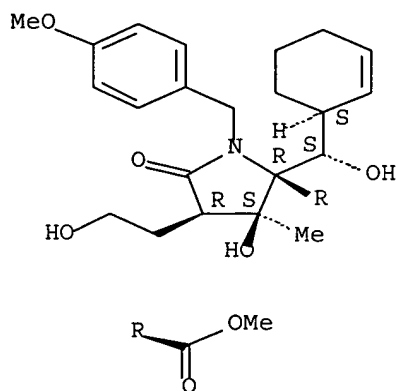
Absolute stereochemistry. Rotation (-).



RN 704910-41-8 HCAPLUS

CN D-Proline, 2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-3-hydroxy-4-(2-hydroxyethyl)-1-[(4-methoxyphenyl)methyl]-3-methyl-5-oxo-, methyl ester, (3S,4R) - (9CI) (CA INDEX NAME)

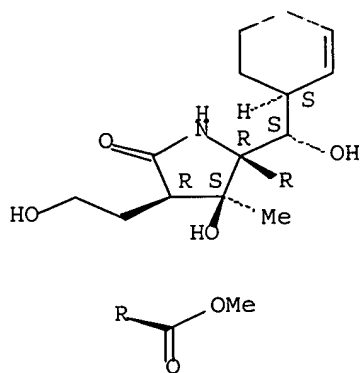
Absolute stereochemistry. Rotation (+).



RN 704910-42-9 HCAPLUS

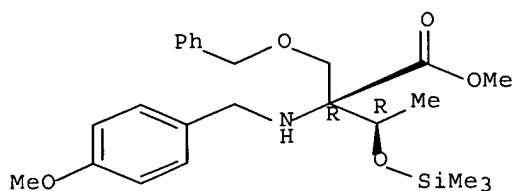
CN D-Proline, 2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-3-hydroxy-4-(2-hydroxyethyl)-3-methyl-5-oxo-, methyl ester, (3S,4R) - (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



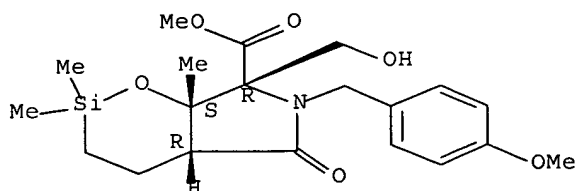
RN 704910-43-0 HCAPLUS
 CN D-Isovaline, N-[(4-methoxyphenyl)methyl]-2'-(phenylmethoxy)-3-
 [(trimethylsilyl)oxy]-, methyl ester, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

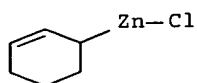


RN 704910-44-1 HCAPLUS
 CN 1,2-Oxasilino[5,6-c]pyrrole-7-carboxylic acid, octahydro-7-(hydroxymethyl)-
 6-[(4-methoxyphenyl)methyl]-2,2,7a-trimethyl-5-oxo-, methyl ester,
 (4aR,7R,7aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



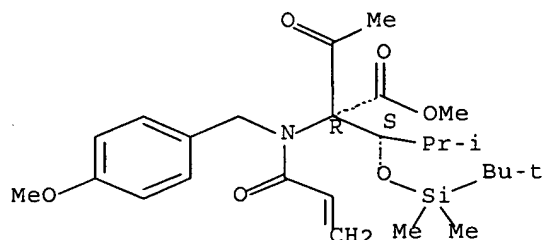
RN 704910-45-2 HCAPLUS
 CN Zinc, chloro-2-cyclohexen-1-yl- (9CI) (CA INDEX NAME)



RN 857311-65-0 HCAPLUS

CN L-Leucine, 2-acetyl-3-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]-N-[(4-methoxyphenyl)methyl]-N-(1-oxo-2-propenyl)-, methyl ester, (3S)- (9CI) (CA INDEX NAME)

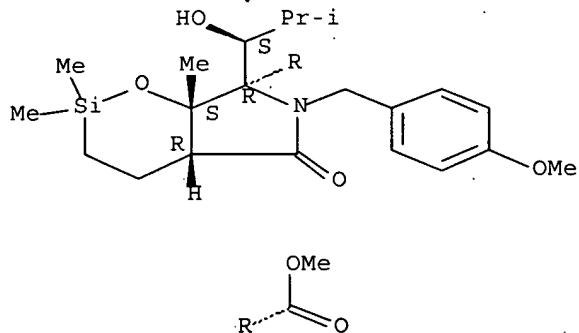
Absolute stereochemistry. Rotation (-).



RN 857681-75-5 HCAPLUS

CN 1,2-Oxasilino[5,6-c]pyrrole-7-carboxylic acid, octahydro-7-[(1S)-1-hydroxy-2-methylpropyl]-6-[(4-methoxyphenyl)methyl]-2,2,7a-trimethyl-5-oxo-, methyl ester, (4aR,7R,7aS)- (9CI) (CA INDEX NAME)

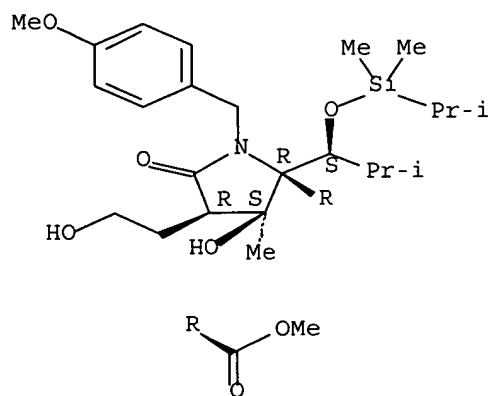
Absolute stereochemistry. Rotation (-).



RN 857681-76-6 HCAPLUS

CN D-Proline, 2-[(1S)-1-[[dimethyl(1-methylethyl)silyl]oxy]-2-methylpropyl]-3-hydroxy-4-(2-hydroxyethyl)-1-[(4-methoxyphenyl)methyl]-3-methyl-5-oxo-, methyl ester, (3S,4R)- (9CI) (CA INDEX NAME)

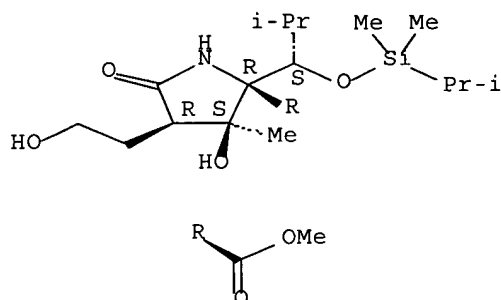
Absolute stereochemistry. Rotation (+).



RN 857681-77-7 HCAPLUS

CN D-Proline, 2-[(1S)-1-[[dimethyl(1-methylethyl)silyl]oxy]-2-methylpropyl]-3-hydroxy-4-(2-hydroxyethyl)-3-methyl-5-oxo-, methyl ester, (3S,4R)- (9CI)
(CA INDEX NAME)

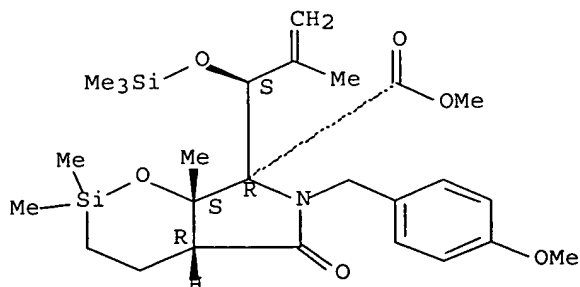
Absolute stereochemistry. Rotation (+).



RN 857681-80-2 HCAPLUS

CN 1,2-Oxasilino[5,6-c]pyrrole-7-carboxylic acid, octahydro-6-[(4-methoxyphenyl)methyl]-2,2,7a-trimethyl-7-[(1S)-2-methyl-1-[(trimethylsilyl)oxy]-2-propenyl]-5-oxo-, methyl ester, (4aR,7R,7aS)- (9CI) (CA INDEX NAME)

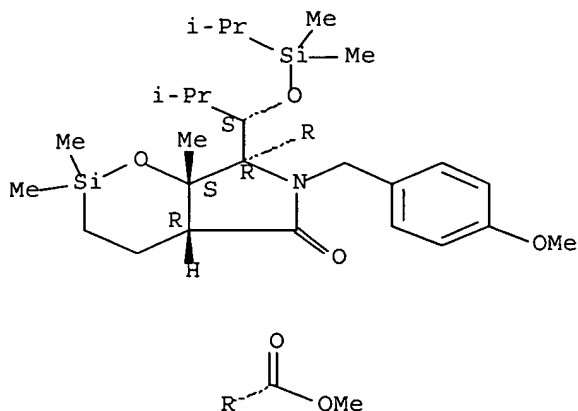
Absolute stereochemistry. Rotation (+).



RN 857681-81-3 HCAPLUS

CN 1,2-Oxasilino[5,6-c]pyrrole-7-carboxylic acid, 7-[(1S)-1-[[dimethyl(1-methylethyl)silyl]oxy]-2-methylpropyl]octahydro-6-[(4-methoxyphenyl)methyl]-2,2,7a-trimethyl-5-oxo-, methyl ester, (4aR,7R,7aS)-(9CI) (CA INDEX NAME)

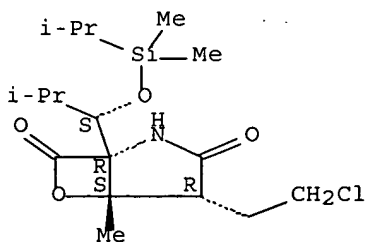
Absolute stereochemistry. Rotation (-).



RN 857681-82-4 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(1S)-1-[[dimethyl(1-methylethyl)silyl]oxy]-2-methylpropyl]-5-methyl-, (1R,4R,5S)-(9CI) (CA INDEX NAME)

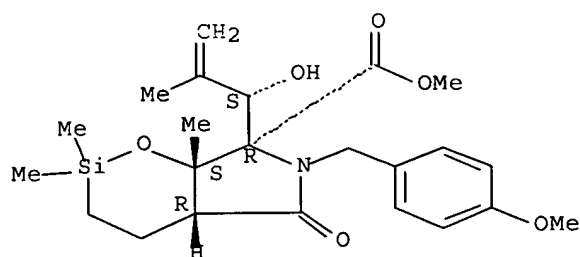
Absolute stereochemistry. Rotation (-).



RN 857681-83-5 HCAPLUS

CN 1,2-Oxasilino[5,6-c]pyrrole-7-carboxylic acid, octahydro-7-[(1S)-1-hydroxy-2-methyl-2-propenyl]-6-[(4-methoxyphenyl)methyl]-2,2,7a-trimethyl-5-oxo-, methyl ester, (4aR,7R,7aS)-(9CI) (CA INDEX NAME)

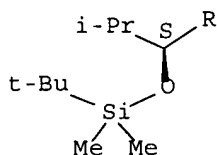
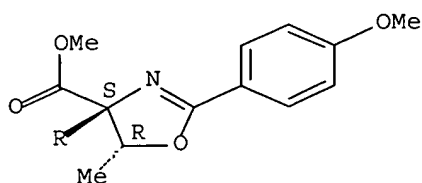
Absolute stereochemistry. Rotation (-).



RN 860453-67-4 HCAPLUS

CN 4-Oxazolecarboxylic acid, 4-[(1S)-1-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]-2-methylpropyl]-4,5-dihydro-2-(4-methoxyphenyl)-5-methyl-, methyl ester, (4S,5R)-(9CI) (CA INDEX NAME)

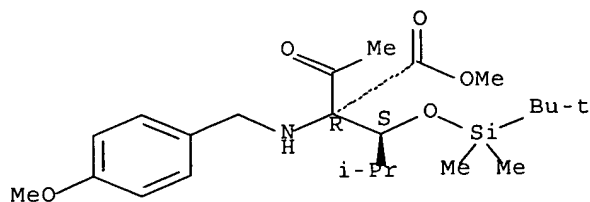
Absolute stereochemistry. Rotation (-).



RN 860453-68-5 HCAPLUS

CN L-Leucine, 2-acetyl-3-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]-N-[(4-methoxyphenyl)methyl]-, methyl ester, (3S)-(9CI) (CA INDEX NAME)

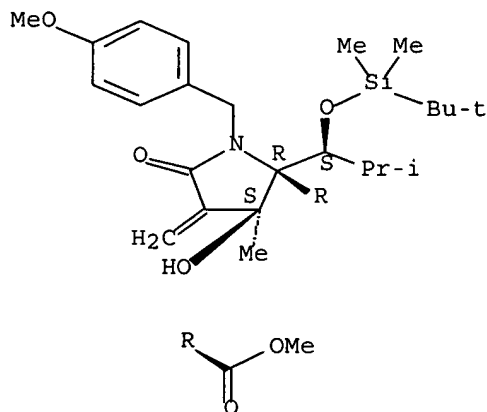
Absolute stereochemistry. Rotation (-).



RN 860453-69-6 HCAPLUS

CN D-Proline, 2-[(1S)-1-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]-2-methylpropyl]-3-hydroxy-1-[(4-methoxyphenyl)methyl]-3-methyl-4-methylene-5-oxo-, methyl ester, (3S)-(9CI) (CA INDEX NAME)

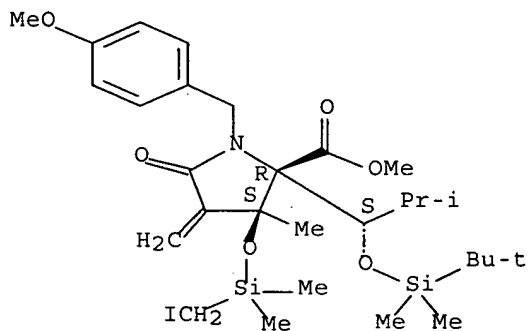
Absolute stereochemistry. Rotation (-).



RN 860453-70-9 HCAPLUS

CN D-Proline, 2-[(1S)-1-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]-2-methylpropyl]-3-[[[(iodomethyl)dimethylsilyl]oxy]-1-[(4-methoxyphenyl)methyl]-3-methyl-4-methylene-5-oxo-, methyl ester, (3S)-(9CI) (CA INDEX NAME)

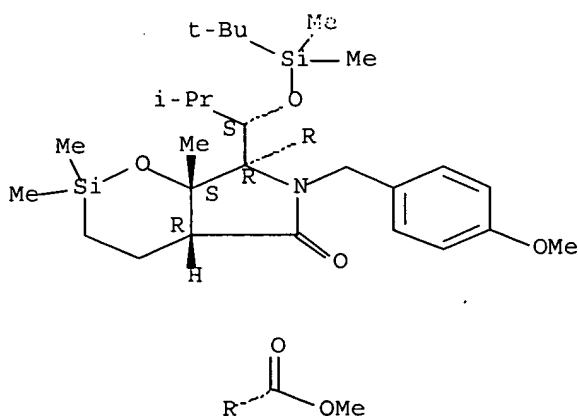
Absolute stereochemistry. Rotation (-).



RN 860453-71-0 HCAPLUS

CN 1,2-Oxasilino[5,6-c]pyrrole-7-carboxylic acid, 7-[(1S)-1-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]-2-methylpropyl]octahydro-6-[(4-methoxyphenyl)methyl]-2,2,7a-trimethyl-5-oxo-, methyl ester, (4aR,7R,7aS)-(9CI) (CA INDEX NAME)

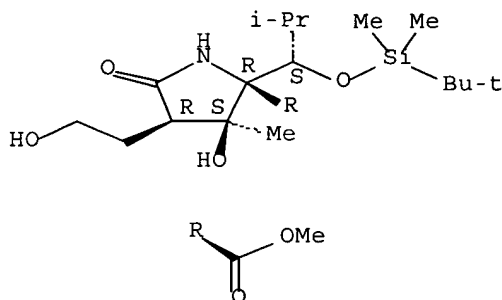
Absolute stereochemistry. Rotation (+).



RN 860453-72-1 HCAPLUS

CN D-Proline, 2-[(1S)-1-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]-2-methylpropyl]-3-hydroxy-4-(2-hydroxyethyl)-3-methyl-5-oxo-, methyl ester, (3S,4R)- (9CI) (CA INDEX NAME)

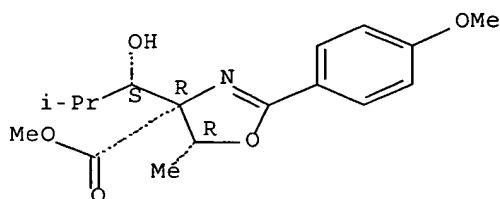
Absolute stereochemistry. Rotation (+).



RN 860453-75-4 HCAPLUS

CN 4-Oxazolecarboxylic acid, 4,5-dihydro-4-[(1S)-1-hydroxy-2-methylpropyl]-2-(4-methoxyphenyl)-5-methyl-, methyl ester, (4R,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

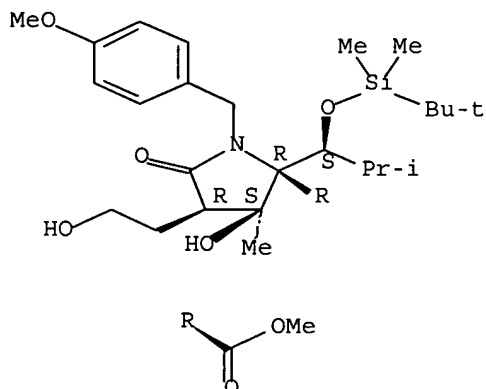


RN 860453-76-5 HCAPLUS

CN D-Proline, 2-[(1S)-1-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]-2-methylpropyl]-3-hydroxy-4-(2-hydroxyethyl)-1-[(4-methoxyphenyl)methyl]-3-

methyl-5-oxo-, methyl ester, (3S,4R)- (9CI) (CA INDEX NAME)

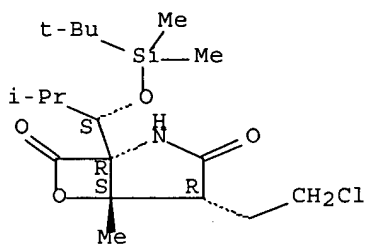
Absolute stereochemistry. Rotation (+).



RN 860453-77-6 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(1S)-1-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]-2-methylpropyl]-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT 437742-34-2P, (-)-Salinosporamide A

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL

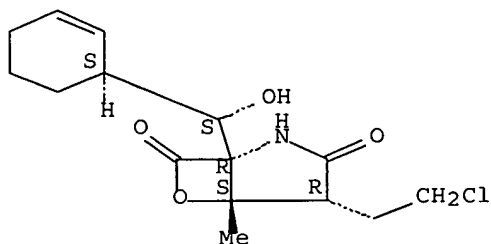
(Biological study); PREP (Preparation); USES (Uses)

(preparation of salinosporamide A for use in anticancer pharmaceutical compns. as proteasome inhibitors)

RN 437742-34-2 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(S)-[(1S)-2-cyclohexen-1-yl]hydroxymethyl]-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



L31 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:1106831 HCAPLUS Full-text

DOCUMENT NUMBER: 143:386848

TITLE: Simple stereocontrolled synthesis of salinosporamide A

INVENTOR(S): Corey, Elias J.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 17 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

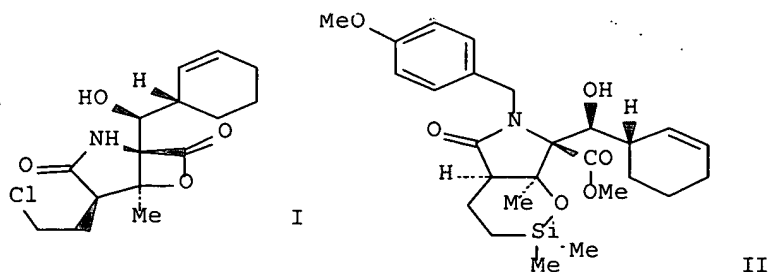
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005228186	A1	20051013	US 2004-821621	20040409
WO 2005113558	A2	20051201	WO 2005-US12218	20050411
WO 2005113558	A3	20051222		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

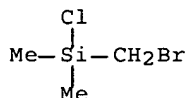
PRIORITY APPLN. INFO.: US 2004-821621 A 20040409

OTHER SOURCE(S): CASREACT 143:386848

GI

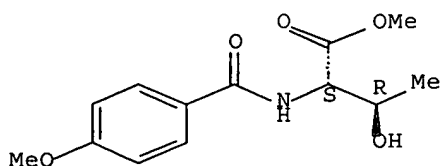


- AB A simple and effective stereocontrolled synthesis of (-)-salinosporamide A (I) was disclosed. The process, the first total synthesis of salinosporamide A, is capable of providing the compound in substantial quantities for further biol. studies. The disclosed synthetic scheme started from N-(4-methoxybenzoyl)-L-threonine Me ester and included the preparation of several novel synthetic intermediate compds., such as lactam II. Salinosporamide A is a synthetic target of special interest because it has previously shown proteasome inhibiting activity and shown cytotoxic activity in vitro against many tumor cell lines (IC50 values of 10 nM or less).
- IT 16532-02-8, (Bromomethyl)chlorodimethylsilane
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (asym. synthesis of salinosporamide A)
- RN 16532-02-8 HCAPLUS
- CN Silane, (bromomethyl)chlorodimethyl- (7CI, 8CI, 9CI) (CA INDEX NAME)



- IT 704910-28-1P, N-(4-Methoxybenzoyl)-L-threonine methyl ester
 704910-29-2P 704910-30-5P 704910-31-6P
 704910-32-7P 704910-33-8P 704910-34-9P
 704910-35-0P 704910-36-1P 704910-37-2P
 704910-38-3P 704910-39-4P 704910-41-8P
 704910-42-9P 704910-44-1P 704910-45-2P
 RL: RCT (Reactant); SPN (Synthetic preparation);
 PREP (Preparation); RACT (Reactant or reagent)
 (asym. synthesis of salinosporamide A)
- RN 704910-28-1 HCAPLUS
- CN L-Threonine, N-(4-methoxybenzoyl)-, methyl ester (9CI) (CA INDEX NAME)

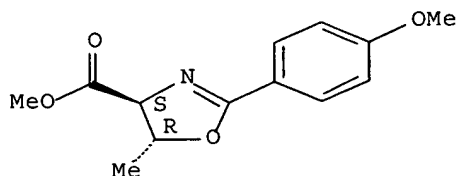
Absolute stereochemistry.



RN 704910-29-2 HCAPLUS

CN 4-Oxazolecarboxylic acid, 4,5-dihydro-2-(4-methoxyphenyl)-5-methyl-, methyl ester, (4S,5R)- (9CI) (CA INDEX NAME)

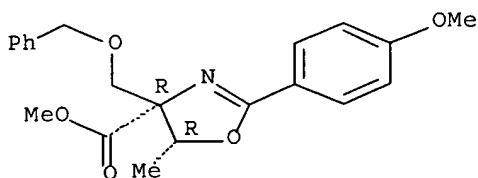
Absolute stereochemistry. Rotation (+).



RN 704910-30-5 HCAPLUS

CN 4-Oxazolecarboxylic acid, 4,5-dihydro-2-(4-methoxyphenyl)-5-methyl-4-[(phenylmethoxy)methyl]-, methyl ester, (4R,5R)- (9CI) (CA INDEX NAME)

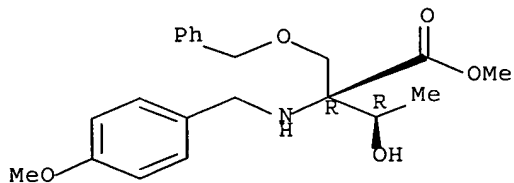
Absolute stereochemistry. Rotation (-).



RN 704910-31-6 HCAPLUS

CN D-Isovaline, 3-hydroxy-N-[(4-methoxyphenyl)methyl]-2'-(phenylmethoxy)-, methyl ester, (3R)- (9CI) (CA INDEX NAME)

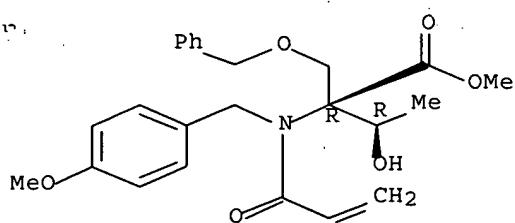
Absolute stereochemistry. Rotation (-).



RN 704910-32-7 HCAPLUS

CN D-Isovaline, 3-hydroxy-N-[(4-methoxyphenyl)methyl]-N-(1-oxo-2-propenyl)-2'-(phenylmethoxy)-, methyl ester, (3R)- (9CI) (CA INDEX NAME)

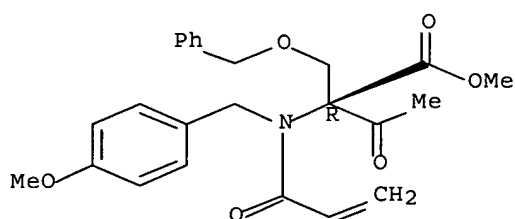
Absolute stereochemistry. Rotation (-).



RN 704910-33-8 HCAPLUS

CN D-Isovaline, N-[(4-methoxyphenyl)methyl]-3-oxo-N-(1-oxo-2-propenyl)-2'-(phenylmethoxy)-, methyl ester (9CI) (CA INDEX NAME)

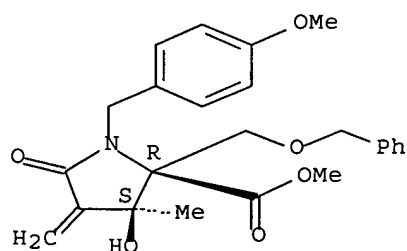
Absolute stereochemistry. Rotation (-).



RN 704910-34-9 HCAPLUS

CN D-Proline, 3-hydroxy-1-[(4-methoxyphenyl)methyl]-3-methyl-4-methylene-5-oxo-2-[(phenylmethoxy)methyl]-, methyl ester, (3S)- (9CI) (CA INDEX NAME)

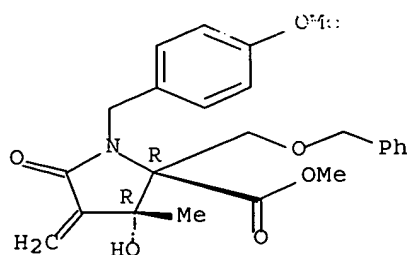
Absolute stereochemistry. Rotation (-).



RN 704910-35-0 HCAPLUS

CN D-Proline, 3-hydroxy-1-[(4-methoxyphenyl)methyl]-3-methyl-4-methylene-5-oxo-2-[(phenylmethoxy)methyl]-, methyl ester, (3R)- (9CI) (CA INDEX NAME)

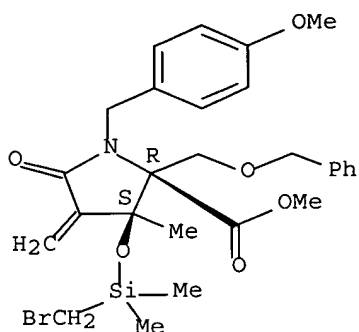
Absolute stereochemistry. Rotation (-).



RN 704910-36-1 HCAPLUS

CN D-Proline, 3-[[[(bromomethyl)dimethylsilyl]oxy]-1-[(4-methoxyphenyl)methyl]-3-methyl-4-methylene-5-oxo-2-[(phenylmethoxy)methyl]-, methyl ester, (3S)-(9CI) (CA INDEX NAME)

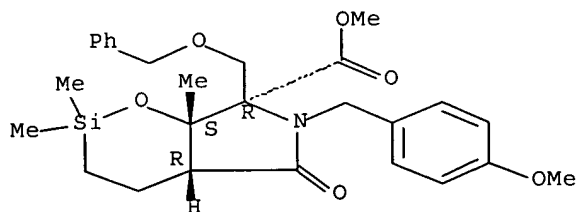
Absolute stereochemistry. Rotation (-).



RN 704910-37-2 HCAPLUS

CN 1,2-Oxasilino[5,6-c]pyrrole-7-carboxylic acid, octahydro-6-[(4-methoxyphenyl)methyl]-2,2,7a-trimethyl-5-oxo-7-[(phenylmethoxy)methyl]-, methyl ester, (4aR,7R,7aS)- (9CI) (CA INDEX NAME)

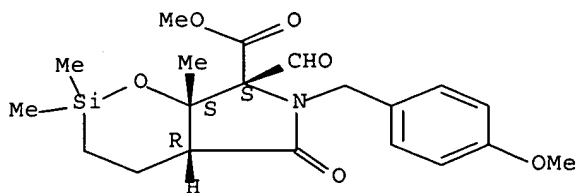
Absolute stereochemistry. Rotation (-).



RN 704910-38-3 HCAPLUS

CN 1,2-Oxasilino[5,6-c]pyrrole-7-carboxylic acid, 7-formyloctahydro-6-[(4-methoxyphenyl)methyl]-2,2,7a-trimethyl-5-oxo-, methyl ester, (4aR,7S,7aS)- (9CI) (CA INDEX NAME)

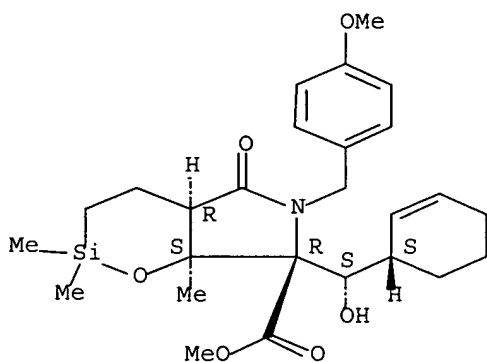
Absolute stereochemistry. Rotation (-).



RN 704910-39-4 HCAPLUS

CN 1,2-Oxasilino[5,6-c]pyrrole-7-carboxylic acid, 7-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]octahydro-6-[(4-methoxyphenyl)methyl]-2,2,7a-trimethyl-5-oxo-, methyl ester, (4aR,7R,7aS)- (9CI) (CA INDEX NAME)

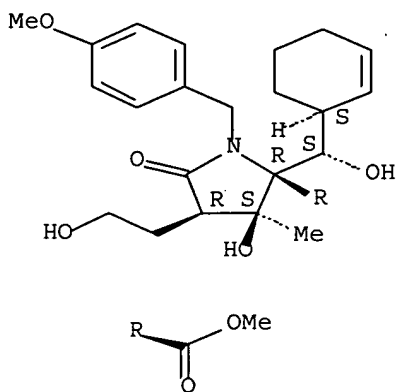
Absolute stereochemistry. Rotation (-).



RN 704910-41-8 HCAPLUS

CN D-Proline, 2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-3-hydroxy-4-(2-hydroxyethyl)-1-[(4-methoxyphenyl)methyl]-3-methyl-5-oxo-, methyl ester, (3S,4R)- (9CI) (CA INDEX NAME)

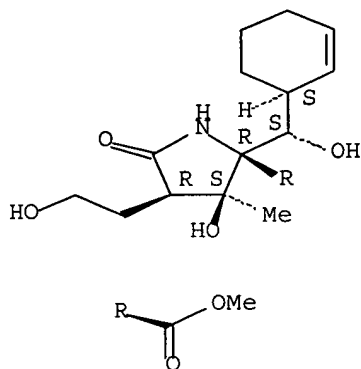
Absolute stereochemistry. Rotation (+).



RN 704910-42-9 HCAPLUS

CN D-Proline, 2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-3-hydroxy-4-(2-hydroxyethyl)-3-methyl-5-oxo-, methyl ester, (3S,4R)- (9CI) (CA INDEX NAME)

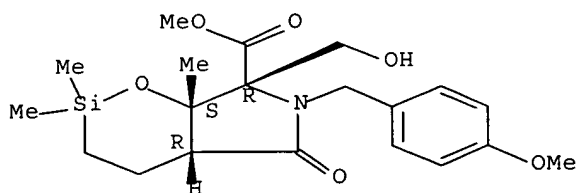
Absolute stereochemistry. Rotation (+).



RN 704910-44-1 HCAPLUS

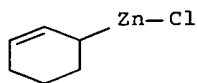
CN 1,2-Oxasilino[5,6-c]pyrrole-7-carboxylic acid, octahydro-7-(hydroxymethyl)-6-[(4-methoxyphenyl)methyl]-2,2,7a-trimethyl-5-oxo-, methyl ester, (4aR,7R,7aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 704910-45-2 HCAPLUS

CN Zinc, chloro-2-cyclohexen-1-yl- (9CI) (CA INDEX NAME)



IT 437742-34-2P

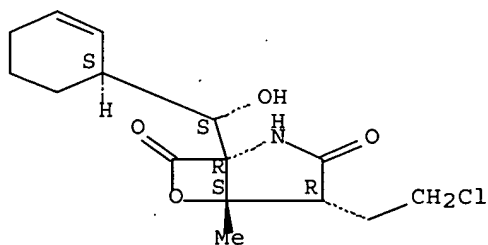
RL: SPN (Synthetic preparation); PREP (Preparation)
(asym. synthesis of salinosporamide A)

RN 437742-34-2 HCAPLUS

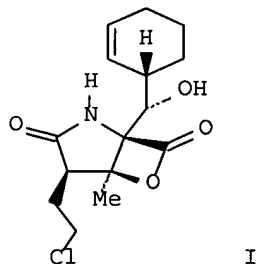
CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(S)-[(1S)-

2-cyclohexen-1-yl]hydroxymethyl]-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



L31 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2005:421879 HCAPLUS Full-text
 DOCUMENT NUMBER: 143:153185
 TITLE: Total Synthesis of Salinosporamide A
 AUTHOR(S): Endo, Atsushi; Danishefsky, Samuel J.
 CORPORATE SOURCE: Laboratory for Bioorganic Chemistry, Sloan-Kettering
 Institute for Cancer Research, New York, NY, 10021,
 USA
 SOURCE: Journal of the American Chemical Society (2005),
 127(23), 8298-8299
 CODEN: JACSAT; ISSN: 0002-7863
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 143:153185
 GI

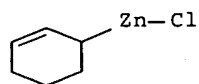


AB Total synthesis of potent proteasome inhibitor salinosporamide A (I) has been accomplished, which features strictly substrate-controlled operations starting with the only chiral center of (R)-pyroglutamic acid. The consecutive quaternary carbons within I have been efficiently constructed by manipulation of two intramol. reactions: carbonate-mediated internal acylation of an imidate ester and selenocyclization of aldehyde to exocyclic methylene group.

IT 704910-45-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (total synthesis of salinosporamide A)

RN 754910-45-2 HCAPLUS

CN Zinc, chloro-2-cyclohexen-1-yl- (9CI) (CA INDEX NAME)



IT 856681-96-4P 856681-97-5P 856681-98-6P
 856682-02-5P 856682-03-6P 856682-04-7P
 856682-05-8P 856682-06-9P 856682-07-0P
 856682-08-1P 856682-09-2P 856682-10-5P
 856682-11-6P 856682-12-7P 856682-13-8P
 856682-14-9P 856682-15-0P 856682-16-1P
 856682-20-7P 856682-21-8P 856682-22-9P
 856682-23-0P 856682-24-1P 856682-25-2P
 856682-26-3P 856682-27-4P

RL: RCT (Reactant); SPN (Synthetic preparation);

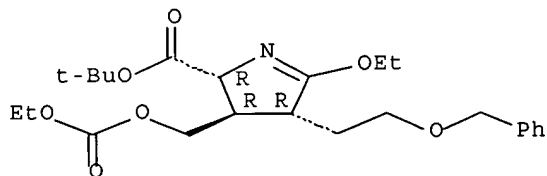
PREP (Preparation); RACT (Reactant or reagent)

(total synthesis of salinosporamide A)

RN 856681-96-4 HCAPLUS

CN 2H-Pyrrole-2-carboxylic acid, 5-ethoxy-3-[[[(ethoxycarbonyl)oxy]methyl]-3,4-dihydro-4-[2-(phenylmethoxy)ethyl]-, 1,1-dimethylethyl ester, (2R,3R,4R)- (9CI) (CA INDEX NAME)

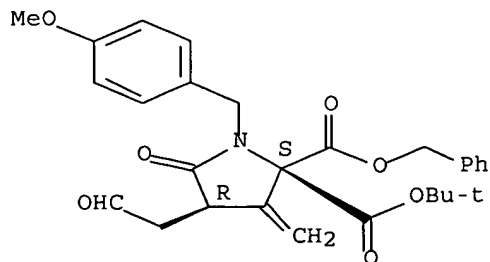
Absolute stereochemistry. Rotation (-).



RN 856681-97-5 HCAPLUS

CN 2,2-Pyrrolidinedicarboxylic acid, 1-[(4-methoxyphenyl)methyl]-3-methylene-5-oxo-4-(2-oxoethyl)-, 1,1-dimethylethyl phenylmethyl ester, (2S,4R)- (9CI) (CA INDEX NAME)

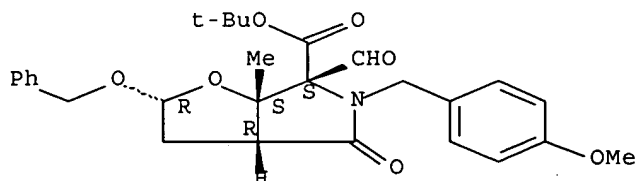
Absolute stereochemistry. Rotation (+).



RN 856681-98-6 HCAPLUS

CN 2H-Furo[2,3-c]pyrrole-6-carboxylic acid, 6-formylhexahydro-5-[(4-methoxyphenyl)methyl]-6a-methyl-4-oxo-2-(phenylmethoxy)-, 1,1-dimethylethyl ester, (2R,3aR,6S,6aS)- (9CI) (CA INDEX NAME)

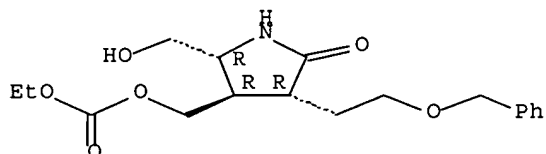
Absolute stereochemistry. Rotation (-).



RN 856682-02-5 HCAPLUS

CN Carbonic acid, ethyl [(2R,3R,4R)-2-(hydroxymethyl)-5-oxo-4-[2-(phenylmethoxy)ethyl]-3-pyrrolidinyl]methyl ester (9CI) (CA INDEX NAME)

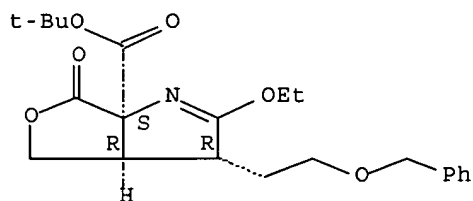
Absolute stereochemistry. Rotation (-).



RN 856682-03-6 HCAPLUS

CN 3H-Furo[3,4-b]pyrrole-6a(6H)-carboxylic acid, 2-ethoxy-3a,4-dihydro-6-oxo-3-[2-(phenylmethoxy)ethyl]-, 1,1-dimethylethyl ester, (3R,3aR,6aS)- (9CI) (CA INDEX NAME)

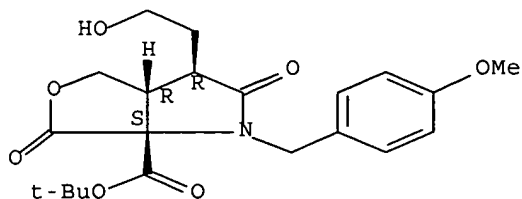
Absolute stereochemistry. Rotation (+).



RN 856682-04-7 HCAPLUS

CN 1H-Furo[3,4-b]pyrrole-6a(6H)-carboxylic acid, tetrahydro-3-(2-hydroxyethyl)-1-[(4-methoxyphenyl)methyl]-2,6-dioxo-, 1,1-dimethylethyl ester, (3R,3aR,6aS)- (9CI) (CA INDEX NAME)

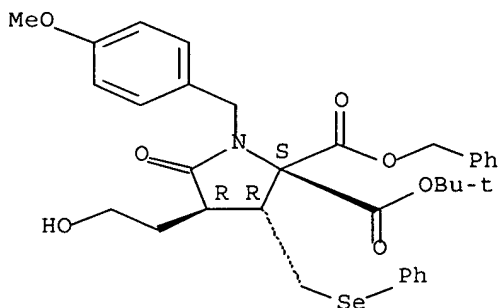
Absolute stereochemistry. Rotation (+).



RN 856682-05-8 HCAPLUS

CN 2,2-Pyrrolidinedicarboxylic acid, 4-(2-hydroxyethyl)-1-[(4-methoxyphenyl)methyl]-5-oxo-3-[(phenylseleno)methyl]-, 1,1-dimethylethyl phenylmethyl ester, (2S,3R,4R)- (9CI) (CA INDEX NAME)

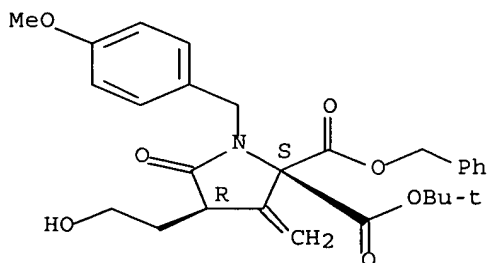
Absolute stereochemistry. Rotation (-).



RN 856682-06-9 HCAPLUS

CN 2,2-Pyrrolidinedicarboxylic acid, 4-(2-hydroxyethyl)-1-[(4-methoxyphenyl)methyl]-3-methylene-5-oxo-, 1,1-dimethylethyl phenylmethyl ester, (2S,4R)- (9CI) (CA INDEX NAME)

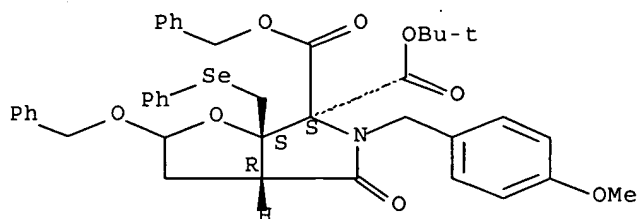
Absolute stereochemistry. Rotation (+).



RN 856682-07-0 HCAPLUS

CN 6H-Furo[2,3-c]pyrrole-6,6-dicarboxylic acid, hexahydro-5-[(4-methoxyphenyl)methyl]-4-oxo-2-(phenylmethoxy)-6a-[(phenylseleno)methyl]-, 1,1-dimethylethyl phenylmethyl ester, (3aR,6S,6aS)- (9CI) (CA INDEX NAME)

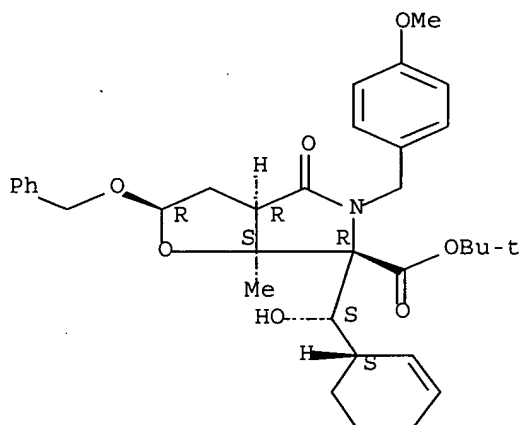
Absolute stereochemistry.



RN 856682-08-1 HCAPLUS

CN 2H-Furo[2,3-c]pyrrole-6-carboxylic acid, 6-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]hexahydro-5-[(4-methoxyphenyl)methyl]-6a-methyl-4-oxo-2-(phenylmethoxy)-, 1,1-dimethylethyl ester, (2R,3aR,6R,6aS)-(9CI) (CA INDEX NAME)

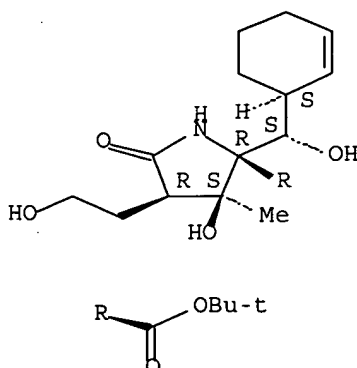
Absolute stereochemistry. Rotation (-).



RN 856682-09-2 HCAPLUS

CN D-Proline, 2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-3-hydroxy-4-(2-hydroxyethyl)-3-methyl-5-oxo-, 1,1-dimethylethyl ester, (3S,4R)-(9CI) (CA INDEX NAME)

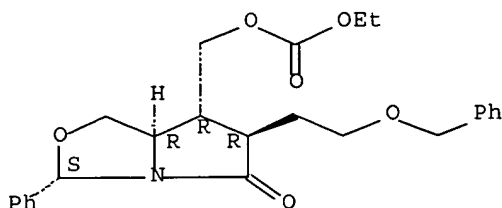
Absolute stereochemistry. Rotation (-).



RN 856682-10-5 HCAPLUS

CN Carbonic acid, ethyl [(3S,6R,7R,7aR)-tetrahydro-5-oxo-3-phenyl-6-[2-(phenylmethoxy)ethyl]-1H,3H-pyrrolo[1,2-c]oxazol-7-yl]methyl ester (9CI)
(CA INDEX NAME)

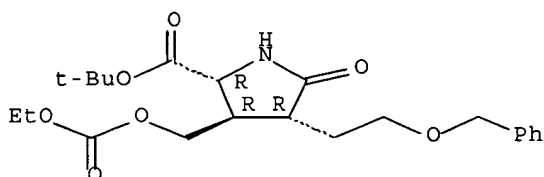
Absolute stereochemistry. Rotation (-).



RN 856682-11-6 HCAPLUS

CN D-Proline, 3-[[[(ethoxycarbonyl)oxy]methyl]-5-oxo-4-[2-(phenylmethoxy)ethyl]-, 1,1-dimethylethyl ester, (3R,4R)- (9CI) (CA INDEX NAME)

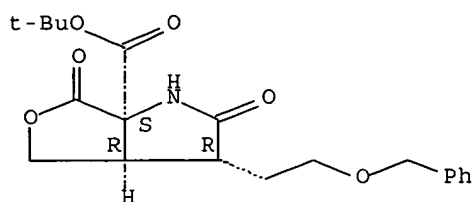
Absolute stereochemistry. Rotation (-).



RN 856682-12-7 HCAPLUS

CN 1H-Furo[3,4-b]pyrrole-6a(6H)-carboxylic acid, tetrahydro-2,6-dioxo-3-[2-(phenylmethoxy)ethyl]-, 1,1-dimethylethyl ester, (3R,3aR,6aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

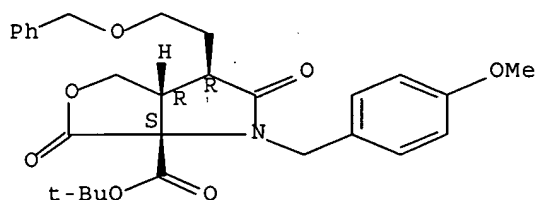


RN 856682-13-8 HCAPLUS

CN 1H-Furo[3,4-b]pyrrole-6a(6H)-carboxylic acid, tetrahydro-1-[(4-methoxyphenyl)methyl]-2,6-dioxo-3-[2-(phenylmethoxy)ethyl]-,

1,1-dimethylethyl ester, (3R,3aR,6aS) - (9CI) (CA INDEX NAME)

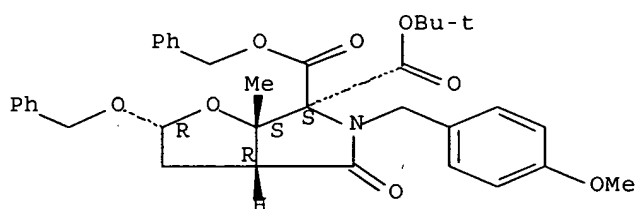
Absolute stereochemistry. Rotation (+).



RN 856682-14-9 HCAPLUS

CN 6H-Furo[2,3-c]pyrrole-6,6-dicarboxylic acid, hexahydro-5-[(4-methoxyphenyl)methyl]-6a-methyl-4-oxo-2-(phenylmethoxy)-, 1,1-dimethylethyl phenylmethyl ester, (2R,3aR,6S,6aS) - (9CI) (CA INDEX NAME)

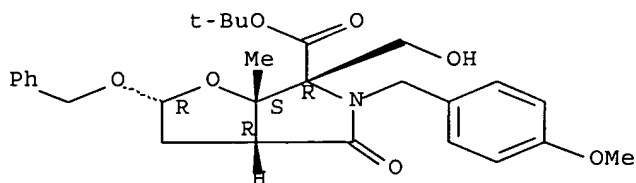
Absolute stereochemistry. Rotation (-).



RN 856682-15-0 HCAPLUS

CN 2H-Furo[2,3-c]pyrrole-6-carboxylic acid, hexahydro-6-(hydroxymethyl)-5-[(4-methoxyphenyl)methyl]-6a-methyl-4-oxo-2-(phenylmethoxy)-, 1,1-dimethylethyl ester, (2R,3aR,6R,6aS) - (9CI) (CA INDEX NAME)

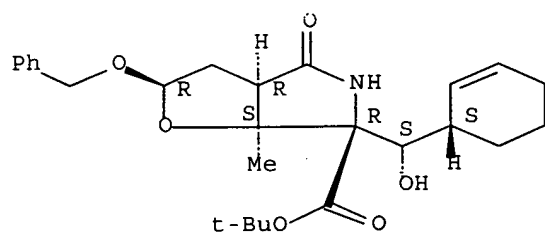
Absolute stereochemistry. Rotation (-).



RN 856682-16-1 HCAPLUS

CN 2H-Furo[2,3-c]pyrrole-6-carboxylic acid, 6-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]hexahydro-6a-methyl-4-oxo-2-(phenylmethoxy)-, 1,1-dimethylethyl ester, (2R,3aR,6R,6aS) - (9CI) (CA INDEX NAME)

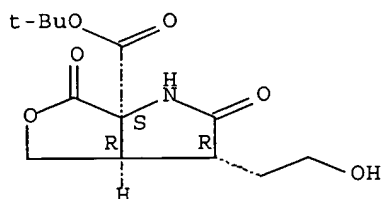
Absolute stereochemistry. Rotation (-).



RN 856682-20-7 HCAPLUS

CN 1H-Furo[3,4-b]pyrrole-6a(6H)-carboxylic acid, tetrahydro-3-(2-hydroxyethyl)-2,6-dioxo-, 1,1-dimethylethyl ester, (3R,3aR,6aS)- (9CI)
(CA INDEX NAME)

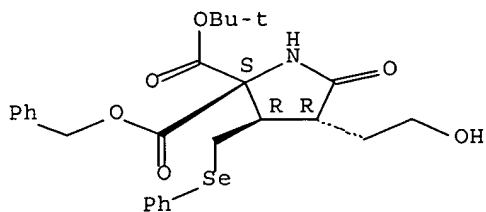
Absolute stereochemistry.



RN 856682-21-8 HCAPLUS

CN 2,2-Pyrrolidinedicarboxylic acid, 4-(2-hydroxyethyl)-5-oxo-3-[(phenylseleno)methyl]-, 1,1-dimethylethyl phenylmethyl ester, (2S,3R,4R)- (9CI) (CA INDEX NAME)

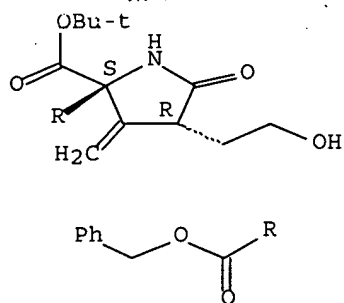
Absolute stereochemistry.



RN 856682-22-9 HCAPLUS

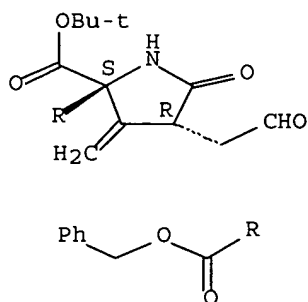
CN 2,2-Pyrrolidinedicarboxylic acid, 4-(2-hydroxyethyl)-3-methylene-5-oxo-, 1,1-dimethylethyl phenylmethyl ester, (2S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



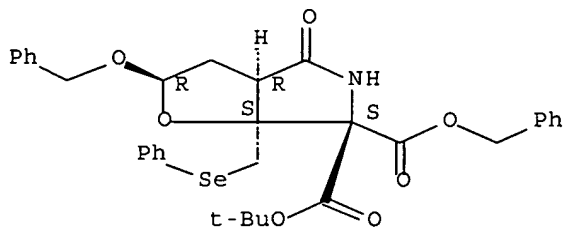
RN 856682-23-0 HCAPLUS
 CN 2,2-Pyrrolidinedicarboxylic acid, 3-methylene-5-oxo-4-(2-oxoethyl)-, 1,1-dimethylethyl phenylmethyl ester, (2S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



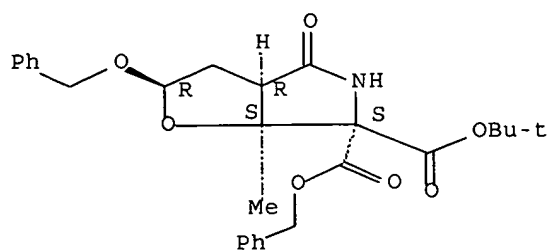
RN 856682-24-1 HCAPLUS
 CN 6H-Furo[2,3-c]pyrrole-6,6-dicarboxylic acid, hexahydro-4-oxo-2-(phenylmethoxy)-6a-[(phenylseleno)methyl]-, 1,1-dimethylethyl phenylmethyl ester, (2R,3aR,6S,6aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 856682-25-2 HCAPLUS
 CN 6H-Furo[2,3-c]pyrrole-6,6-dicarboxylic acid, hexahydro-6a-methyl-4-oxo-2-(phenylmethoxy)-, 1,1-dimethylethyl phenylmethyl ester, (2R,3aR,6S,6aS)- (9CI) (CA INDEX NAME)

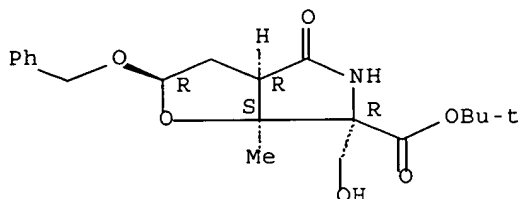
Absolute stereochemistry.



RN 856682-26-3 HCAPLUS

CN 2H-Furo[2,3-c]pyrrole-6-carboxylic acid, hexahydro-6-(hydroxymethyl)-6a-methyl-4-oxo-2-(phenylmethoxy)-, 1,1-dimethylethyl ester, (2R,3aR,6R,6aS)-(9CI) (CA INDEX NAME)

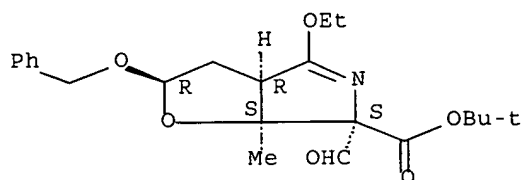
Absolute stereochemistry.



RN 856682-27-4 HCAPLUS

CN 2H-Furo[2,3-c]pyrrole-6-carboxylic acid, 4-ethoxy-6-formyl-3,3a,6,6a-tetrahydro-6a-methyl-2-(phenylmethoxy)-, 1,1-dimethylethyl ester, (2R,3aR,6S,6aS)-(9CI) (CA INDEX NAME)

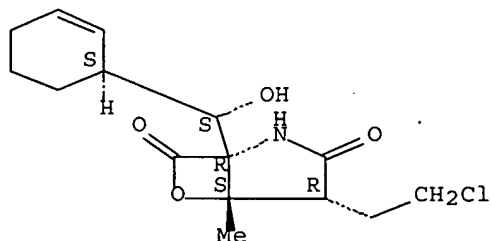
Absolute stereochemistry.

IT 437742-34-2P 856682-18-3P 856682-19-4P
856682-28-5PRL: SPN (Synthetic preparation); PREP (Preparation)
(total synthesis of salinosporamide A)

RN 437742-34-2 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(S)-[(1S)-2-cyclohexen-1-yl]hydroxymethyl]-5-methyl-, (1R,4R,5S)-(9CI) (CA INDEX NAME)

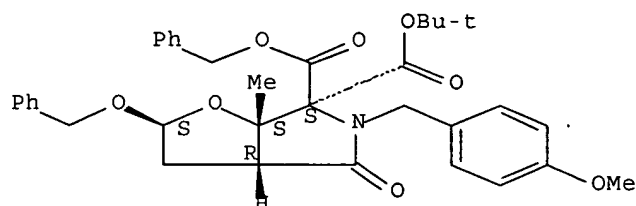
Absolute stereochemistry. Rotation (-).



RN 856682-18-3 HCAPLUS

CN 6H-Furo[2,3-c]pyrrole-6,6-dicarboxylic acid, hexahydro-5-[(4-methoxyphenyl)methyl]-6a-methyl-4-oxo-2-(phenylmethoxy)-, 1,1-dimethylethyl phenylmethyl ester, (2S,3aR,6S,6aS)- (9CI) (CA INDEX NAME)

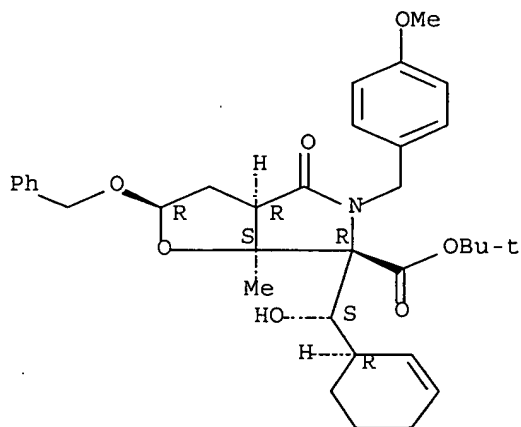
Absolute stereochemistry. Rotation (+).



RN 856682-19-4 HCAPLUS

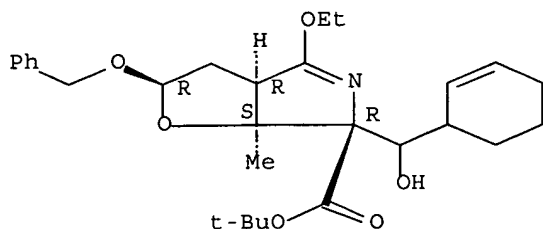
CN 2H-Furo[2,3-c]pyrrole-6-carboxylic acid, 6-[(S)-(1R)-2-cyclohexen-1-ylhydroxymethyl]hexahydro-5-[(4-methoxyphenyl)methyl]-6a-methyl-4-oxo-2-(phenylmethoxy)-, 1,1-dimethylethyl ester, (2R,3aR,6R,6aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 856682-28-5 HCAPLUS
CN 2H-Furo[2,3-c]pyrrole-6-carboxylic acid, 6-(2-cyclohexen-1-ylhydroxymethyl)-4-ethoxy-3,3a,6,6a-tetrahydro-6a-methyl-2-(phenylmethoxy)-, 1,1-dimethylethyl ester, (2R,3aR,6R,6aS)- (9CI) (CA INDEX NAME)

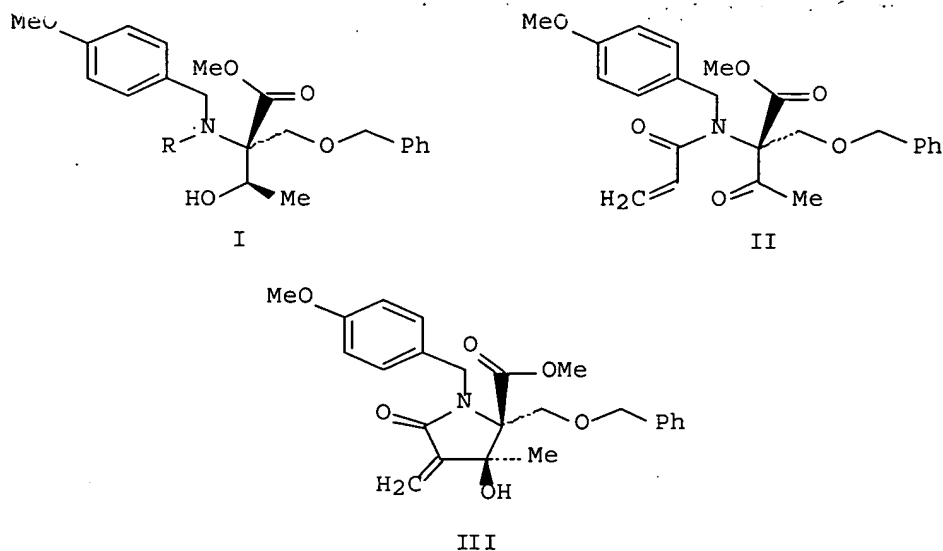
Absolute stereochemistry.



REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:340603 HCAPLUS Full-text
DOCUMENT NUMBER: 141:54117
TITLE: A Simple Stereocontrolled Synthesis of Salinosporamide A
AUTHOR(S): Reddy, Leleti Rajender; Saravanan, P.; Corey, E. J.
CORPORATE SOURCE: Department of Chemistry and Chemical Biology, Harvard University, Cambridge, MA, 02138, USA
SOURCE: Journal of the American Chemical Society (2004), 126(20), 6230-6231
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 141:54117
GI

4/09/04

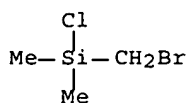


AB A simple and effective stereocontrolled synthesis of salinosporamide A has been developed. Of special note is the direct conversion of amino(benzyloxymethyl)hydroxybutanoate I (R = H) to acryloyl derivative I (R = COCH:CH₂). Also, quinuclidine proved to be superior to other bases in the cyclization of oxybutanoate II to oxopyrrolidinecarboxylate III. This process, the first synthesis of salinosporamide A, is capable of providing the compound in substantial quantities for further biol. studies. Salinosporamide A was of special interest as a synthetic target because of its potent in vitro cytotoxic activity against many tumor cell lines (IC₅₀ values of 10 nM or less).

IT 16532-02-8, Bromomethyldimethylchlorosilane
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (asym. synthesis of salinosporamide A)

RN 16532-02-8 HCAPLUS

CN Silane, (bromomethyl)chlorodimethyl- (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 704910-28-1P 704910-29-2P 704910-30-5P
 704910-31-6P 704910-32-7P 704910-33-8P
 704910-34-9P 704910-36-1P 704910-37-2P
 704910-38-3P 704910-39-4P 704910-41-8P
 704910-42-9P 704910-43-0P 704910-44-1P
 704910-45-2P
 RL: RCT (Reactant); SPN (Synthetic preparation);
 PREP (Preparation); RACT (Reactant or reagent)
 (asym. synthesis of salinosporamide A)

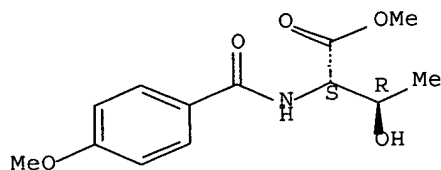
RN 704910-28-1 HCAPLUS

10/821,621

September 22, 2006

CN 4-Threonine, N-(4-methoxybenzoyl)-, methyl ester (9CI) (CA INDEX NAME)

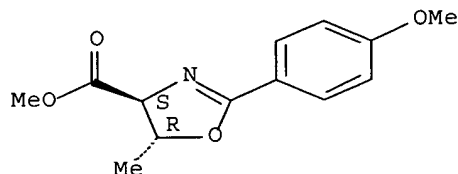
Absolute stereochemistry.



RN 704910-29-2 HCAPLUS

CN 4-Oxazolecarboxylic acid, 4,5-dihydro-2-(4-methoxyphenyl)-5-methyl-, methyl ester, (4S,5R)- (9CI) (CA INDEX NAME)

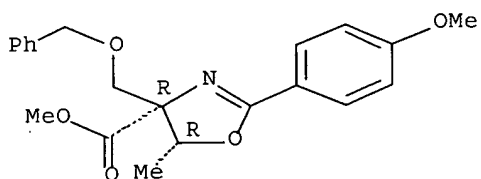
Absolute stereochemistry. Rotation (+).



RN 704910-30-5 HCAPLUS

CN 4-Oxazolecarboxylic acid, 4,5-dihydro-2-(4-methoxyphenyl)-5-methyl-4-[(phenylmethoxy)methyl]-, methyl ester, (4R,5R)- (9CI) (CA INDEX NAME)

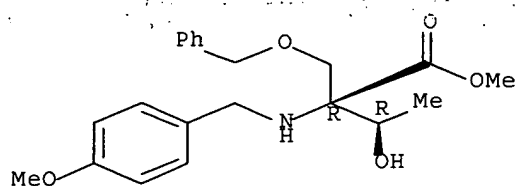
Absolute stereochemistry. Rotation (-).



RN 704910-31-6 HCAPLUS

CN D-Isovaline, 3-hydroxy-N-[(4-methoxyphenyl)methyl]-2'-(phenylmethoxy)-, methyl ester, (3R)- (9CI) (CA INDEX NAME)

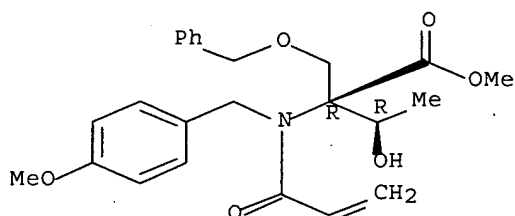
Absolute stereochemistry. Rotation (-).



RN 704910-32-7 HCAPLUS

CN D-Isovaline, 3-hydroxy-N-[(4-methoxyphenyl)methyl]-N-(1-oxo-2-propenyl)-2'-(phenylmethoxy)-, methyl ester, (3R)- (9CI) (CA INDEX NAME)

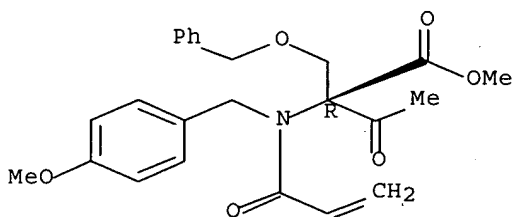
Absolute stereochemistry. Rotation (-).



RN 704910-33-8 HCAPLUS

CN D-Isovaline, N-[(4-methoxyphenyl)methyl]-3-oxo-N-(1-oxo-2-propenyl)-2'-(phenylmethoxy)-, methyl ester (9CI) (CA INDEX NAME)

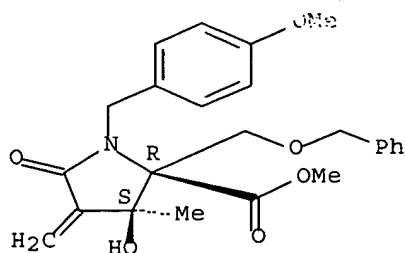
Absolute stereochemistry. Rotation (-).



RN 704910-34-9 HCAPLUS

CN D-Proline, 3-hydroxy-1-[(4-methoxyphenyl)methyl]-3-methyl-4-methylene-5-oxo-2-[(phenylmethoxy)methyl]-, methyl ester, (3S)- (9CI) (CA INDEX NAME)

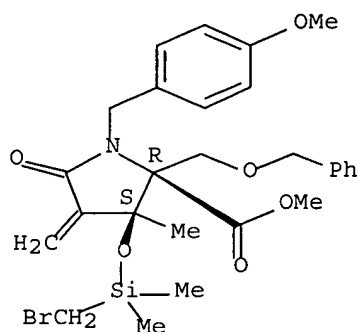
Absolute stereochemistry. Rotation (-).



RN 704910-36-1 HCAPLUS

CN D-Proline, 3-[[[(bromomethyl)dimethylsilyl]oxy]-1-[(4-methoxyphenyl)methyl]-3-methyl-4-methylene-5-oxo-2-[(phenylmethoxy)methyl]-, methyl ester, (3S)-(9CI) (CA INDEX NAME)

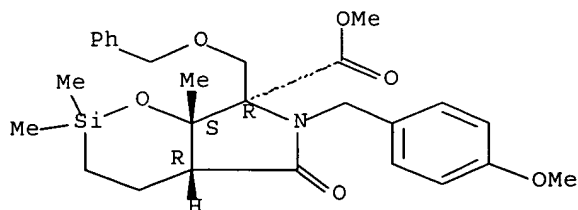
Absolute stereochemistry. Rotation (-).



RN 704910-37-2 HCAPLUS

CN 1,2-Oxasilino[5,6-c]pyrrole-7-carboxylic acid, octahydro-6-[(4-methoxyphenyl)methyl]-2,2,7a-trimethyl-5-oxo-7-[(phenylmethoxy)methyl]-, methyl ester, (4aR,7R,7aS)-(9CI) (CA INDEX NAME)

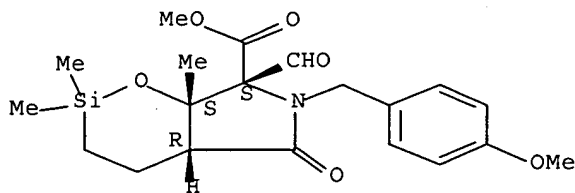
Absolute stereochemistry. Rotation (-).



RN 704910-38-3 HCAPLUS

CN 1,2-Oxasilino[5,6-c]pyrrole-7-carboxylic acid, 7-formyloctahydro-6-[(4-methoxyphenyl)methyl]-2,2,7a-trimethyl-5-oxo-, methyl ester, (4aR,7S,7aS)-(9CI) (CA INDEX NAME)

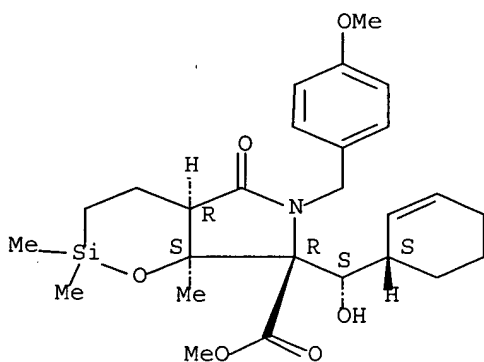
Absolute stereochemistry. Rotation (-).



RN 704910-39-4 HCAPLUS

CN 1,2-Oxasilino[5,6-c]pyrrole-7-carboxylic acid, 7-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]octahydro-6-[(4-methoxyphenyl)methyl]-2,2,7a-trimethyl-5-oxo-, methyl ester, (4aR,7R,7aS) - (9CI) (CA INDEX NAME)

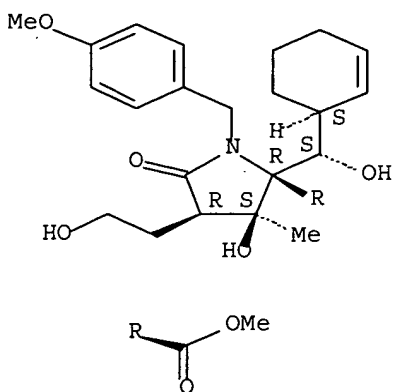
Absolute stereochemistry. Rotation (-).



RN 704910-41-8 HCAPLUS

CN D-Proline, 2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-3-hydroxy-4-(2-hydroxyethyl)-1-[(4-methoxyphenyl)methyl]-3-methyl-5-oxo-, methyl ester, (3S,4R) - (9CI) (CA INDEX NAME)

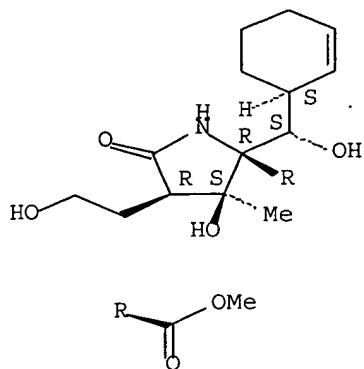
Absolute stereochemistry. Rotation (+).



RN 704910-42-9 HCAPLUS

CN D-Proline, 2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-3-hydroxy-4-(2-hydroxyethyl)-3-methyl-5-oxo-, methyl ester, (3S,4R)- (9CI) (CA INDEX NAME)

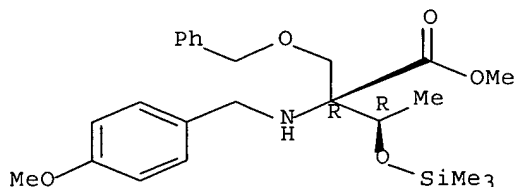
Absolute stereochemistry. Rotation (+).



RN 704910-43-0 HCAPLUS

CN D-Isovaline, N-[(4-methoxyphenyl)methyl]-2'-(phenylmethoxy)-3-[(trimethylsilyl)oxy]-, methyl ester, (3R)- (9CI) (CA INDEX NAME)

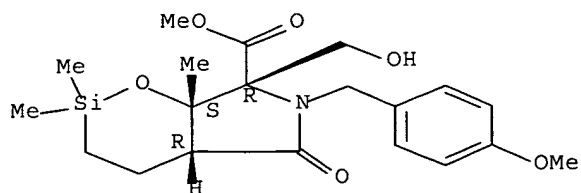
Absolute stereochemistry.



RN 704910-44-1 HCAPLUS

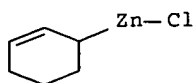
CN 1,2-Oxasilino[5,6-c]pyrrole-7-carboxylic acid, octahydro-7-(hydroxymethyl)-6-[(4-methoxyphenyl)methyl]-2,2,7a-trimethyl-5-oxo-, methyl ester, (4aR,7R,7aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 704910-45-2 HCAPLUS

CN Zinc, chloro-2-cyclohexen-1-yl- (9CI) (CA INDEX NAME)



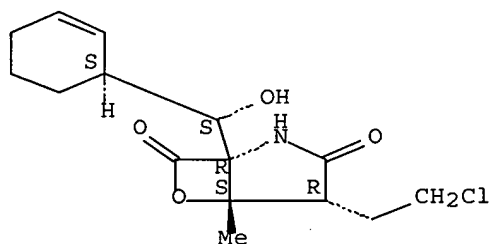
IT 437742-34-2P, Salinosporamide A 704910-35-0P

RL: SPN (Synthetic preparation); PREP (Preparation)
(asym. synthesis of salinosporamide A)

RN 437742-34-2 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(S)-[(1S)-2-cyclohexen-1-yl]hydroxymethyl]-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

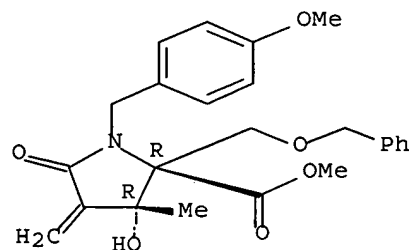
Absolute stereochemistry. Rotation (-).



RN 704910-35-0 HCAPLUS

CN D-Proline, 3-hydroxy-1-[(4-methoxyphenyl)methyl]-3-methyl-4-methylene-5-oxo-2-[(phenylmethoxy)methyl]-, methyl ester, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

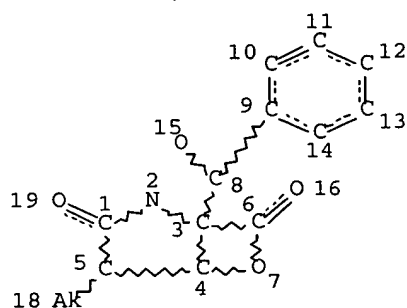


REFERENCE COUNT:

21

THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L4 STR

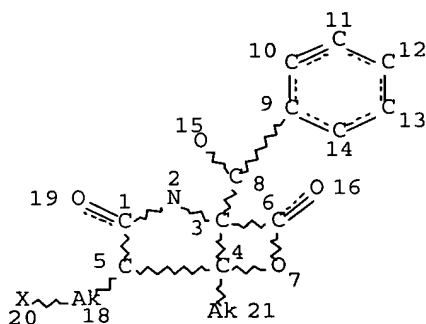


NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 18

STEREO ATTRIBUTES: NONE

L6 40 SEA FILE=REGISTRY SSS FUL L4
L7 16 SEA FILE=HCAPLUS ABB=ON PLU=ON L6 (L) PREP+NT/RL
L8 STR



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 20

STEREO ATTRIBUTES: NONE

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 L15 9 SEA FILE=REGISTRY ABB=ON PLU=ON L12 AND (C6 AND NCOC2)/ES
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 L16 6 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 (L) RACT+NT/RL AND L15 (L) PRE
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 L28 69 SEA FILE=REGISTRY ABB=ON PLU=ON L12 AND L27
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 P+NT/RL
 L30 12 SEA FILE=HCAPLUS ABB=ON PLU=ON L7 AND (L14 OR L16 OR L18 OR
 L20 OR L23 OR L25 OR L29)
 L31 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 AND L11
 L32 4 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 NOT L31

=> d l32 ibib abs hitstr 1-4

L32 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2006:54100 HCAPLUS Full-text

DOCUMENT NUMBER: 144:128796

TITLE: Preparation of substituted 2-pyrrolidone derivatives
 for use as agrochemical fungicides and insecticides

INVENTOR(S): Hillebrand, Stefan; Gueh, Oliver; Wiese, Welf-Burkhard; Kunz, Klaus; Ullmann, Astrid; Mattes, Amos; Schreier, Peter; Wachendorff-Neumann, Ulrike; Kuck, Karl-Heinz; Loesel, Peter; Malsam, Olga; Reinemer, Peter; Stadler, Marc; Seip, Stephan; Mayer-Bartschmid, Anke; Mueller, Hartwig; Bacon, Kevin

PATENT ASSIGNEE(S): Bayer Cropscience A.-G., Germany

SOURCE: PCT Int. Appl., 303 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

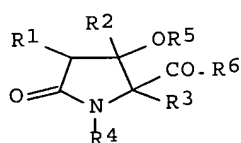
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006005551	A1	20060119	WO 2005-EP7442	20050709
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

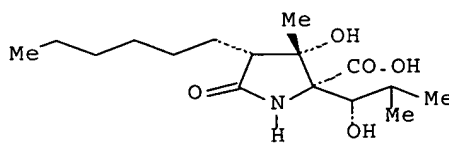
PRIORITY APPLN. INFO.: EP 2004-16320 A 20040712

OTHER SOURCE(S): MARPAT 144:128796

GI



I



II

AB 2-Pyrrolidone derivs., such as I [R1 = H, halogen, alkyl, alkenyl, alkynyl, aryl, heterocyclyl, cycloalkyl, etc.; R2 = H, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, heterocyclyl; R3 = H, alkyl, alkenyl, alkynyl, etc.; R4 = H, alkyl, alkenyl, alkynyl, aryl, heterocyclyl, etc.; R5 = H, alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclyl; R6 = OR, SR, NRR'; R, R' = H, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, heterocyclyl; R5R6 = bond], were prepared for use as argochems. for the control of insects and phytopathogenic plant fungi. Thus, 4R-hexyl-3S-hydroxy-2R-(1S-hydroxy-2-methylpropyl)-3-methyl-5-oxopyrrolidine-2-carboxylic acid (II) via a multistep synthesis starting from Me 5S-isopropyl-2-phenyl-4,5-dihydro-1,3-oxazole-4R-carboxylate and Me 2-acetyloctanoate. The prepared pyrrolidones were tested for activity against Podosphaera leucotricha, Venturia inaequalis, Botrytis cinerea, Phytophthora infestans, and Spodoptera frugiperda.

IT 744200-66-6P 744200-67-7P 744200-69-9P

744200-72-4P 744215-21-2P 744215-22-3P

RL: AGR (Agricultural use); BPN (Biosynthetic preparation); BIOL

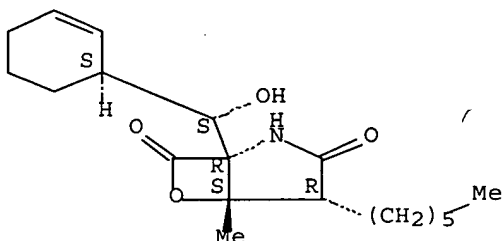
1/5 (Biological study); PREP (Preparation); USES (Uses)

(preparation of substituted 2-pyrrolidone derivs. as agrochem. fungicides and insecticides)

RN 744200-66-6 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-hexyl-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

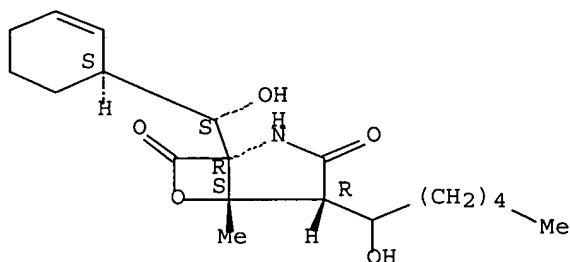
Absolute stereochemistry.



RN 744200-67-7 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-(1-hydroxyhexyl)-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

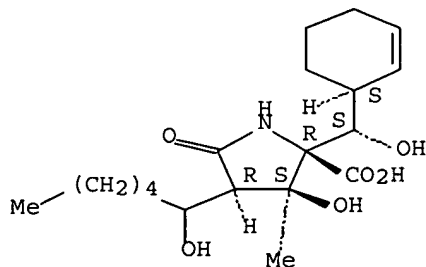
Absolute stereochemistry.



RN 744200-69-9 HCAPLUS

CN D-Proline, 2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-3-hydroxy-4-(1-hydroxyhexyl)-3-methyl-5-oxo-, (3S,4R)- (9CI) (CA INDEX NAME)

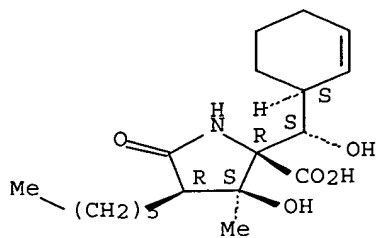
Absolute stereochemistry.



RN 744200-72-4 HCAPLUS

CN D-Proline, 2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-hexyl-3-hydroxy-3-methyl-5-oxo-, (3S,4R)- (9CI) (CA INDEX NAME)

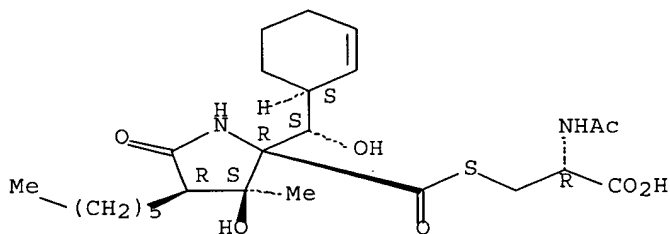
Absolute stereochemistry.



RN 744215-21-2 HCAPLUS

CN L-Cysteine, N-acetyl-, (2R,3S,4R)-2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-hexyl-3-hydroxy-3-methyl-5-oxo-2-pyrrolidinecarboxylate (ester) (9CI) (CA INDEX NAME)

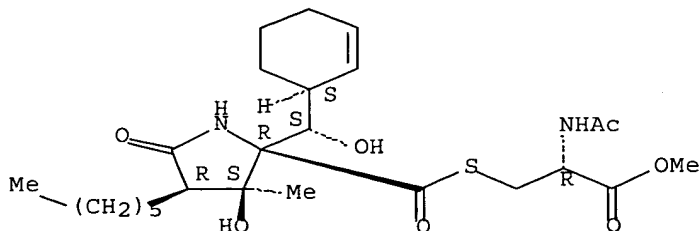
Absolute stereochemistry.



RN 744215-22-3 HCAPLUS

CN L-Cysteine, N-acetyl-, methyl ester, (2R,3S,4R)-2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-hexyl-3-hydroxy-3-methyl-5-oxo-2-pyrrolidinecarboxylate (ester) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



LT 873566-89-3P 873566-91-7P 873566-94-0P,
4R-Hexyl-3S-hydroxy-2R-(1S-hydroxy-2-methylpropyl)-3-methyl-5-
oxopyrrolidine-2-carboxylic acid 873566-95-1P
873566-99-5P 873567-00-1P

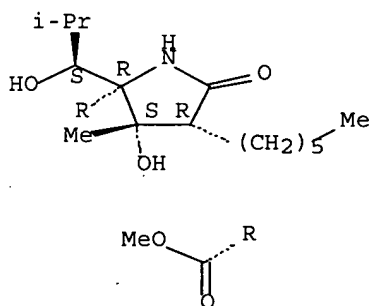
RL: AGR (Agricultural use); RCT (Reactant); SPN (Synthetic
preparation); BIOL (Biological study); PREP (Preparation);
RACT (Reactant or reagent); USES (Uses)

(preparation of substituted 2-pyrrolidone derivs. for use as agrochem.
fungicides and insecticides)

RN 873566-89-3 HCAPLUS

CN D-Proline, 4-hexyl-3-hydroxy-2-[(1S)-1-hydroxy-2-methylpropyl]-3-methyl-5-
oxo-, methyl ester, (3S,4R)- (9CI) (CA INDEX NAME)

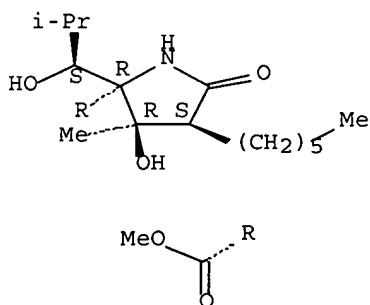
Absolute stereochemistry.



RN 873566-91-7 HCAPLUS

CN D-Proline, 4-hexyl-3-hydroxy-2-[(1S)-1-hydroxy-2-methylpropyl]-3-methyl-5-
oxo-, methyl ester, (3R,4S)- (9CI) (CA INDEX NAME)

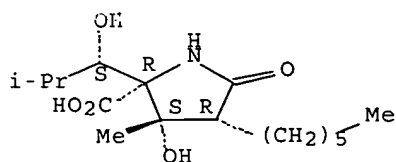
Absolute stereochemistry.



RN 873566-94-0 HCAPLUS

CN D-Proline, 4-hexyl-3-hydroxy-2-[(1S)-1-hydroxy-2-methylpropyl]-3-methyl-5-
oxo-, (3S,4R)- (9CI) (CA INDEX NAME)

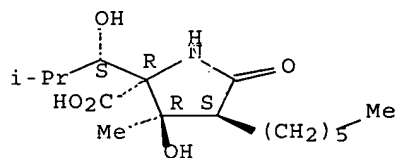
Absolute stereochemistry.



RN 873566-95-1 HCAPLUS

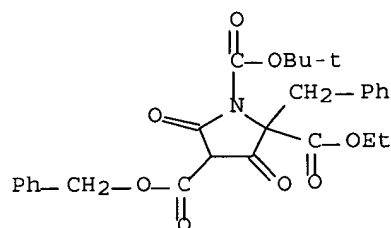
CN D-Proline, 4-hexyl-3-hydroxy-2-[(1S)-1-hydroxy-2-methylpropyl]-3-methyl-5-oxo-, (3R,4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 873566-99-5 HCAPLUS

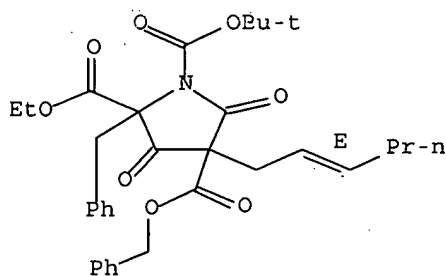
CN 1,2,4-Pyrrolidinetricarboxylic acid, 3,5-dioxo-2-(phenylmethyl)-, 1-(1,1-dimethylethyl) 2-ethyl 4-(phenylmethyl) ester (9CI) (CA INDEX NAME)



RN 873567-00-1 HCAPLUS

CN 1,2,4-Pyrrolidinetricarboxylic acid, 4-(2E)-2-hexenyl-3,5-dioxo-2-(phenylmethyl)-, 1-(1,1-dimethylethyl) 2-ethyl 4-(phenylmethyl) ester (9CI) (CA INDEX NAME)

Double bond geometry as shown.



IT 873566-85-9P 873567-01-2P 873567-02-3P

873690-57-4P

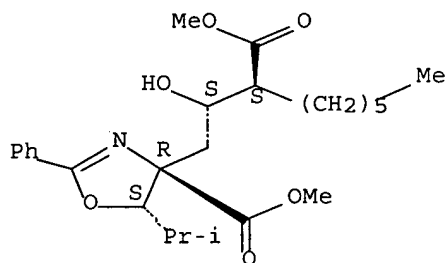
RL: AGR (Agricultural use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of substituted 2-pyrrolidone derivs. for use as agrochem. fungicides and insecticides)

RN 873566-85-9 HCAPLUS

CN 4-Oxazolebutanoic acid, α -hexyl-4,5-dihydro- β -hydroxy-4-(methoxycarbonyl)-5-(1-methylethyl)-2-phenyl-, methyl ester, (α S, β S,4R,5S) - (9CI) (CA INDEX NAME)

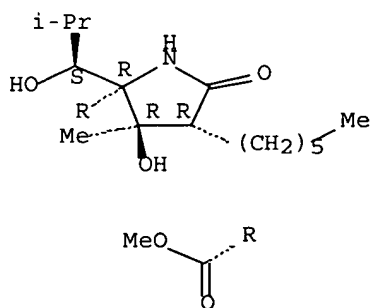
Absolute stereochemistry.



RN 873567-01-2 HCAPLUS

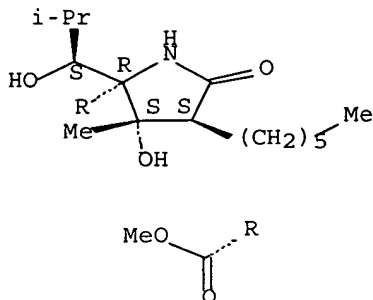
CN D-Proline, 4-hexyl-3-hydroxy-2-[(1S)-1-hydroxy-2-methylpropyl]-3-methyl-5-oxo-, methyl ester, (3R,4R) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



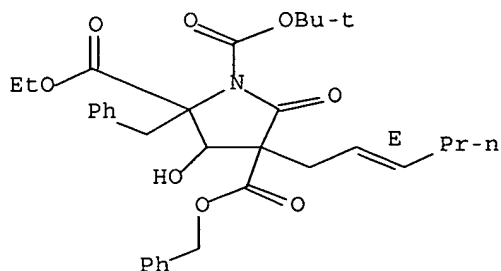
RN 873567-02-3 HCAPLUS
 CN D-Proline, 4-hexyl-3-hydroxy-2-[(1S)-1-hydroxy-2-methylpropyl]-3-methyl-5-oxo-, methyl ester, (3S,4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

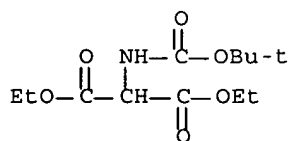


RN 873690-57-4 HCAPLUS
 CN 1,2,4-Pyrrolidinetricarboxylic acid, 4-(2E)-2-hexenyl-3-hydroxy-5-oxo-2-(phenylmethyl)-, 1-(1,1-dimethylethyl) 2-ethyl 4-(phenylmethyl) ester (9CI) (CA INDEX NAME)

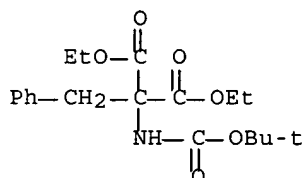
Double bond geometry as shown.



IT 102831-44-7, Diethyl 2-(tert-butoxycarbonylamino)malonate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of substituted 2-pyrrolidone derivs. for use as agrochem. fungicides and insecticides)
 RN 102831-44-7 HCAPLUS
 CN Propanedioic acid, [[(1,1-dimethylethoxy)carbonyl]amino]-, diethyl ester (9CI) (CA INDEX NAME)

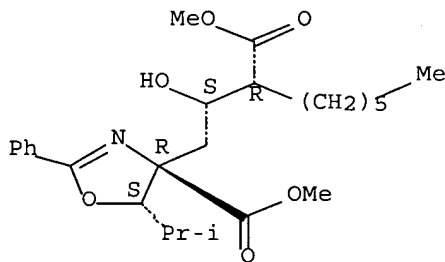


IT 518314-53-9P 873566-86-0P 873566-87-1P
 873566-88-2P 873566-98-4P
 RL: RCT (Reactant); SPN (Synthetic preparation);
 PREP (Preparation); RACT (Reactant or reagent)
 (preparation of substituted 2-pyrrolidone derivs. for use as agrochem.
 fungicides and insecticides)
 RN 518314-53-9 HCAPLUS
 CN Propanedioic acid, [[(1,1-dimethylethoxy)carbonyl]amino] (phenylmethyl)-,
 diethyl ester (9CI) (CA INDEX NAME)



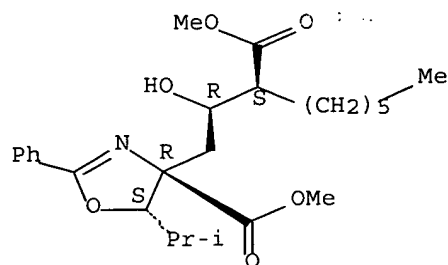
RN 873566-86-0 HCAPLUS
 CN 4-Oxazolebutanoic acid, α -hexyl-4,5-dihydro- β -hydroxy-4-(methoxycarbonyl)-5-(1-methylethyl)-2-phenyl-, methyl ester,
 (α R, β S,4R,5S) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 873566-87-1 HCAPLUS
 CN 4-Oxazolebutanoic acid, α -hexyl-4,5-dihydro- β -hydroxy-4-(methoxycarbonyl)-5-(1-methylethyl)-2-phenyl-, methyl ester,
 (α S, β R,4R,5S) - (9CI) (CA INDEX NAME)

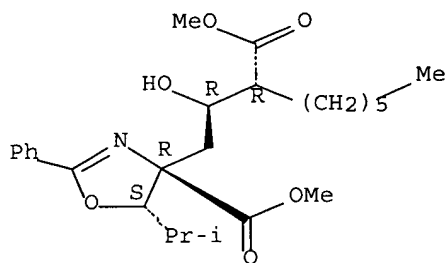
Absolute stereochemistry.



RN 873566-88-2 HCAPLUS

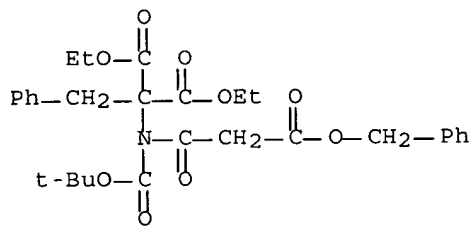
CN 4-Oxazolebutanoic acid, α -hexyl-4,5-dihydro- β -hydroxy-4-(methoxycarbonyl)-5-(1-methylethyl)-2-phenyl-, methyl ester, (α R, β R,4R,5S) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 873566-98-4 HCAPLUS

CN Propanedioic acid, [[(1,1-dimethylethoxy)carbonyl][1,3-dioxo-3-(phenylmethoxy)propyl]amino](phenylmethyl)-, diethyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT:

8

THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:383219 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 143:70990

TITLE: Structure-Activity Relationship Studies of

Salinosporamide A (NPI-0052), a Novel Marine Derived Proteasome Inhibitor

AUTHOR(S): Macherla, Venkat R.; Mitchell, Scott S.; Manam, Rama Rao; Reed, Katherine A.; Chao, Ta-Hsiang; Nicholson, Benjamin; Deyanat-Yazdi, Gordafaried; Mai, Bao; Jensen, Paul R.; Fenical, William F.; Neuteboom, Saskia T. C.; Lam, Kin S.; Palladino, Michael A.; Potts, Barbara C. M.

CORPORATE SOURCE: Nereus Pharmaceuticals, Inc., San Diego, CA, 92121, USA

SOURCE: Journal of Medicinal Chemistry (2005), 48(11), 3684-3687
CODEN: JMCMAR; ISSN: 0022-2623

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 143:70990

AB Salinosporamide A (1, NPI-0052) is a potent proteasome inhibitor in development for treating cancer. In this study, a series of analogs was assayed for cytotoxicity, proteasome inhibition, and inhibition of NF- κ B activation. Marked redns. in potency in cell-based assays accompanied replacement of the chloroethyl group with unhalogenated substituents. Halogen exchange and cyclohexene ring epoxidn. were well tolerated, while some stereochem. modifications significantly attenuated activity. These findings provide insights into structure-activity relationships within this novel series.

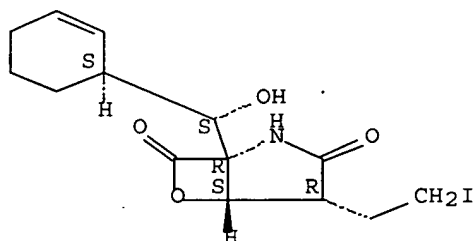
IT 855517-18-9P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(structure-activity relationship studies of salinosporamide A (NPI-0052), a novel marine derived proteasome inhibitor)

RN 855517-18-9 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-(2-iodoethyl)-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 855517-19-0P 855517-20-3P 855517-21-4P

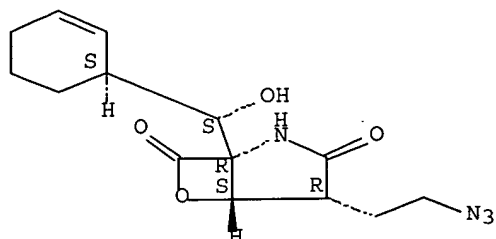
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(structure-activity relationship studies of salinosporamide A (NPI-0052), a novel marine derived proteasome inhibitor)

RN 855517-19-0 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-azidoethyl)-1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

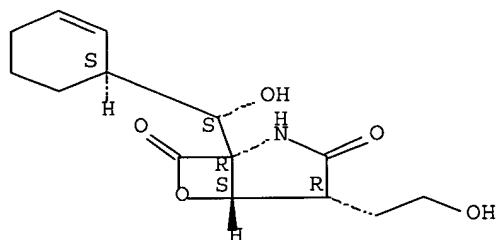
Absolute stereochemistry.



RN 855517-20-3 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-(2-hydroxyethyl)-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

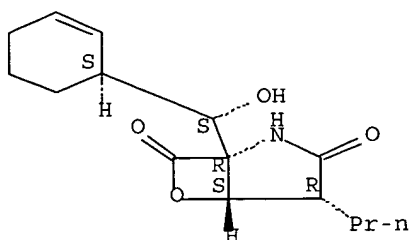
Absolute stereochemistry.



RN 855517-21-4 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-propyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 855517-11-2

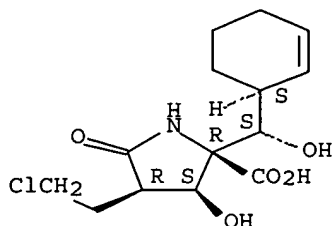
RL: RCT (Reactant); RACT (Reactant or reagent)

(structure-activity relationship studies of salinosporamide A (NPI-0052), a novel marine derived proteasome inhibitor)

RN 855517-11-2 HCAPLUS

CN D-Proline, 4-(2-chloroethyl)-2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-3-hydroxy-5-oxo-, (3S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 855517-23-6P 855517-26-9P

RL: RCT (Reactant); SPN (Synthetic preparation);

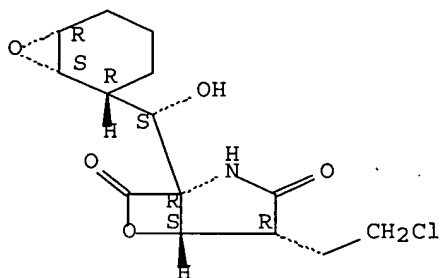
PREP (Preparation); RACT (Reactant or reagent)

(structure-activity relationship studies of salinosporamide A (NPI-0052), a novel marine derived proteasome inhibitor)

RN 855517-23-6 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(S)-hydroxy(1S,2R,6R)-7-oxabicyclo[4.1.0]hept-2-ylmethyl]-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

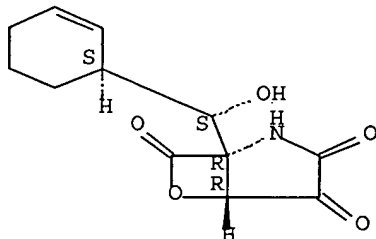
Absolute stereochemistry.



RN 855517-26-9 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,4,7-trione, 1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-, (1R,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



855517-12-3P 855517-24-7P 855517-25-8P

855517-27-0P

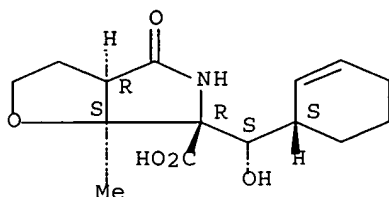
RL: SPN (Synthetic preparation); PREP (Preparation)

(structure-activity relationship studies of salinosporamide A
(NPI-0052), a novel marine derived proteasome inhibitor)

RN 855517-12-3 HCAPLUS

CN 2H-Furo[2,3-c]pyrrole-6-carboxylic acid, 6-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]hexahydro-6a-methyl-4-oxo-, (3aR,6R,6aS)- (9CI) (CA INDEX NAME)

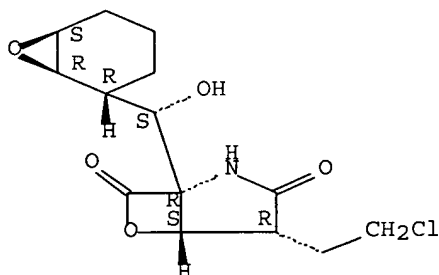
Absolute stereochemistry.



RN 855517-24-7 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(S)-hydroxy(1R,2R,6S)-7-oxabicyclo[4.1.0]hept-2-ylmethyl]-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

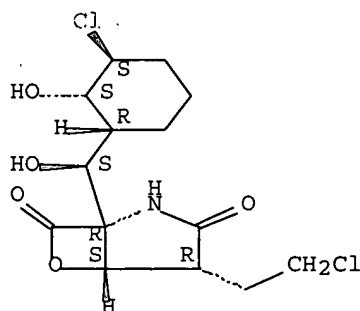
Absolute stereochemistry.



RN 855517-25-8 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(S)-[(1R,2S,3S)-3-chloro-2-hydroxycyclohexyl]hydroxymethyl]-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

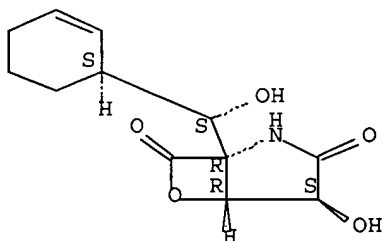
Absolute stereochemistry.



RN 855517-27-0 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-hydroxy-, (1R,4S,5R)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:701941 HCAPLUS Full-text

DOCUMENT NUMBER: 141:224070

TITLE: Preparation of 6-oxa-2-azabicyclo[3.2.0]heptane-3,7-dione (salinosporamide) derivatives for inhibition of proteasomes and treatment of proteasome-mediated diseases

INVENTOR(S): Stadler, Marc; Seip, Stephan; Mueller, Hartwig; Mayer-Bartschmid, Anke; Bruening, Michael-Alexander; Benet-Buchholz, Jordi; Togame, Hiroko; Dodo, Reiko; Reinemer, Peter; Bacon, Kevin; Fuchikami, Kinji; Matsukawa, Satoko; Urbahns, Klaus

PATENT ASSIGNEE(S): Bayer Healthcare AG, Germany; et al.

SOURCE: PCT Int. Appl., 79 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004071382	A2	20040826	WO 2004-EP1097	20040206
WO 2004071382	A3	20050106		

10/821,621

September 22, 2006

W. AA, AG, AI, AM, AT, AU, AZ, BA, BB, BE, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI
 RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2004212296 A1 20040826 AU 2004-212296 20040206
 CA 2515940 AA 20040826 CA 2004-2515940 20040206
 EP 1597262 A2 20051123 EP 2004-708731 20040206

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

BR 2004007234 A 20060131 BR 2004-7234 20040206
 JP 2006517934 T2 20060803 JP 2006-501755 20040206

PRIORITY APPLN. INFO.: EP 2003-3495 A 20030214
 EP 2003-7594 A 20030402
 WO 2004-EP1097 A 20040206

OTHER SOURCE(S): MARPAT 141:224070
 GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The title compound I and II [R1 = H, OH, methylcarbonyloxy; R2, R5 = cyclohexyl or cyclohexyl-2-enyl, wherein cyclohexyl can be substituted with 0-2 hydroxy groups; R3, R6 = H or OH; R4 = H or OH; R7 = OH, cysteinyl, acetylaminoethylsulfanyl, methoxycarbonylethylsulfanyl, etc.] were prepared via fermentation of an Actinomycete of the genus Streptomyces and subsequently derivatized. Compds. I and II are useful as inhibitors of proteasomes for the treatment of proteasome-mediated diseases, such as asthma or cancer. For example, compound III was isolated from the fermentation exts. and its structure was established by HPLC-MS and multi-dimensional NMR techniques. The latter showed an IC50 = 1 nM in the proteasome inhibition assay.

IT 744200-69-9P 744200-72-4P

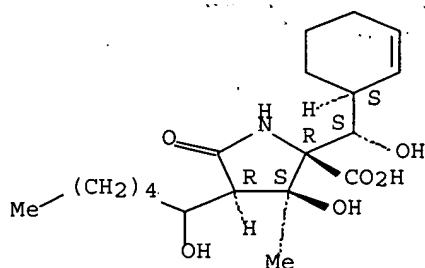
RL: PAC (Pharmacological activity); PUR (Purification or recovery)
 ; RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
 ; USES (Uses)

(Preparation of 6-oxa-2-azabicyclo[3.2.0]heptane-3,7-dione (salinosporamide)
 derivs. for inhibition of proteasomes and treatment of proteasome-mediated diseases)

RN 744200-69-9 HCAPLUS

CN D-Proline, 2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-3-hydroxy-4-(1-hydroxyhexyl)-3-methyl-5-oxo-, (3S,4R)- (9CI) (CA INDEX NAME)

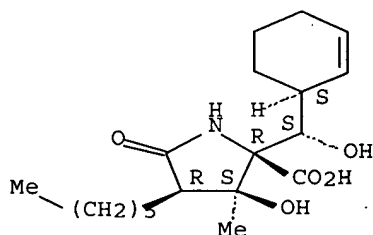
Absolute stereochemistry.



RN 744200-72-4 HCAPLUS

CN D-Proline, 2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-hexyl-3-hydroxy-3-methyl-5-oxo-, (3S,4R)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 744200-67-7P 744215-21-2P 744215-22-3P

RL: PAC (Pharmacological activity); PUR (Purification or recovery)

; THU (Therapeutic use); BIOL (Biological study); PREP

(Preparation); USES (Uses)

(Preparation of 6-oxa-2-azabicyclo[3.2.0]heptane-3,7-dione

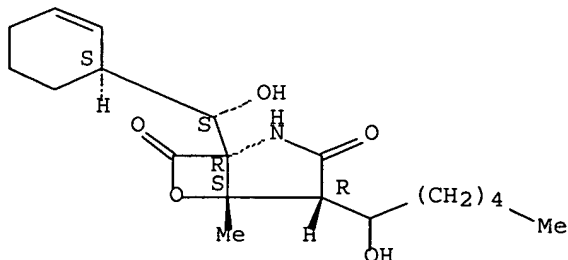
(salinosporamide)

derivs. for inhibition of proteasomes and treatment of
proteasome-mediated diseases)

RN 744200-67-7 HCAPLUS

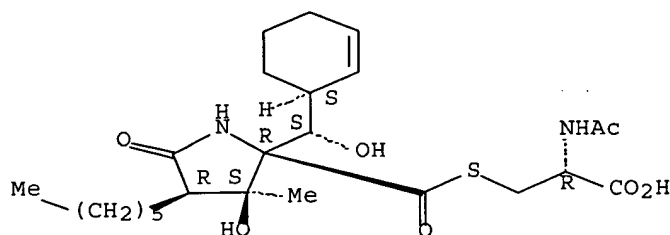
CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-(1-hydroxyhexyl)-5-methyl-, (1R,4R,5S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



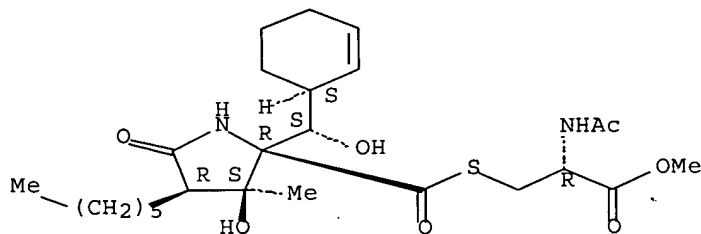
RN 744215-21-2 HCAPLUS
 CN L-Cysteine, N-acetyl-, (2R,3S,4R)-2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-hexyl-3-hydroxy-3-methyl-5-oxo-2-pyrrolidinecarboxylate (ester) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 744215-22-3 HCAPLUS
 CN L-Cysteine, N-acetyl-, methyl ester, (2R,3S,4R)-2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-hexyl-3-hydroxy-3-methyl-5-oxo-2-pyrrolidinecarboxylate (ester) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 744200-75-7P 744200-76-8P 744200-77-9P
 744200-78-0P 744200-79-1P 744200-80-4P
 744200-81-5P 744200-82-6P 744200-83-7P
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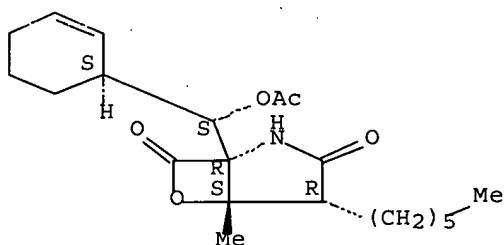
RL: PAC (Pharmacological activity); SPN (Synthetic preparation);
 THU (Therapeutic use); BIOL (Biological study); PREP (Preparation)
 ; USES (Uses)

(Preparation of 6-oxa-2-azabicyclo[3.2.0]heptane-3,7-dione
 (salinosporamide))

derivs. for inhibition of proteasomes and treatment of
 proteasome-mediated diseases)

RN 744200-75-7 HCAPLUS
 CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(acetyloxy)(1S)-2-cyclohexen-1-ylmethyl]-4-hexyl-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

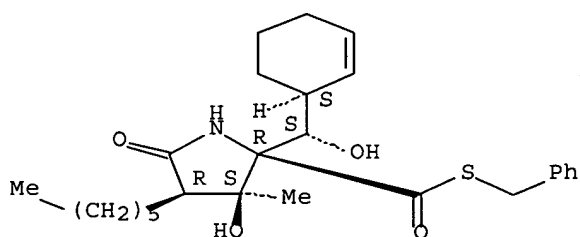
Absolute stereochemistry.



RN 744200-76-8 HCAPLUS

CN 2-Pyrrolidinecarbothioic acid, 2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-hexyl-3-hydroxy-3-methyl-5-oxo-, S-(phenylmethyl) ester, (2R,3S,4R)- (9CI) (CA INDEX NAME)

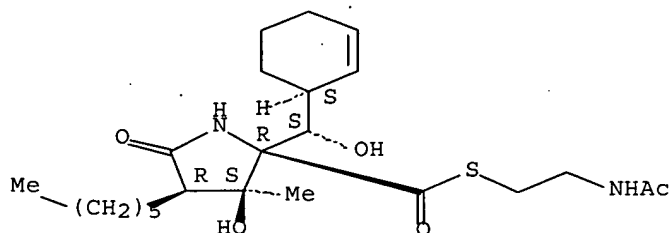
Absolute stereochemistry.



RN 744200-77-9 HCAPLUS

CN 2-Pyrrolidinecarbothioic acid, 2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-hexyl-3-hydroxy-3-methyl-5-oxo-, S-[2-(acetylamino)ethyl] ester, (2R,3S,4R)- (9CI) (CA INDEX NAME)

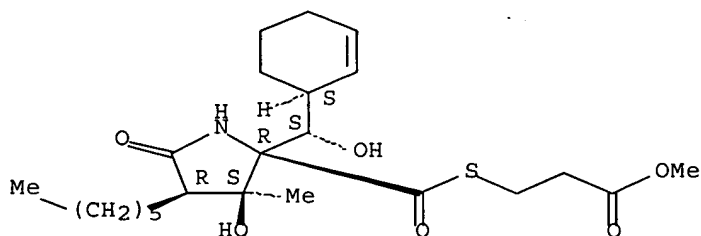
Absolute stereochemistry.



RN 744200-78-0 HCAPLUS

CN Propanoic acid, 3-[[[(2R,3S,4R)-2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-hexyl-3-hydroxy-3-methyl-5-oxo-2-pyrrolidinyl]carbonyl]thio]-, methyl ester (9CI) (CA INDEX NAME)

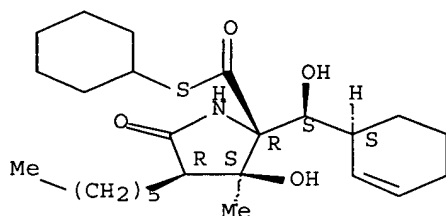
Absolute stereochemistry.



RN 744200-79-1 HCAPLUS

CN 2-Pyrrolidinecarbothioic acid, 2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-hexyl-3-hydroxy-3-methyl-5-oxo-, S-cyclohexyl ester, (2R,3S,4R)- (9CI)
(CA INDEX NAME)

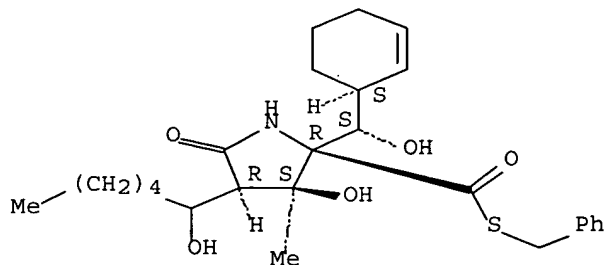
Absolute stereochemistry.



RN 744200-80-4 HCAPLUS

CN 2-Pyrrolidinecarbothioic acid, 2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-3-hydroxy-4-(1-hydroxyhexyl)-3-methyl-5-oxo-, S-(phenylmethyl) ester, (2R,3S,4R)- (9CI) (CA INDEX NAME)

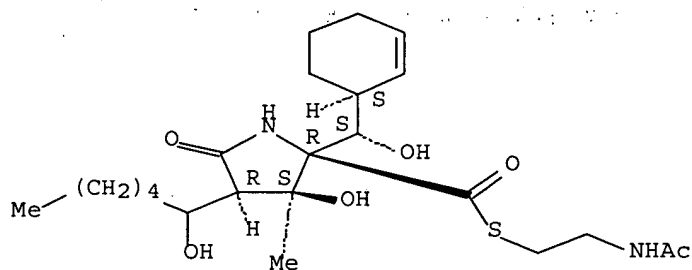
Absolute stereochemistry.



RN 744200-81-5 HCAPLUS

CN 2-Pyrrolidinecarbothioic acid, 2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-3-hydroxy-4-(1-hydroxyhexyl)-3-methyl-5-oxo-, S-[2-(acetamino)ethyl] ester, (2R,3S,4R)- (9CI) (CA INDEX NAME)

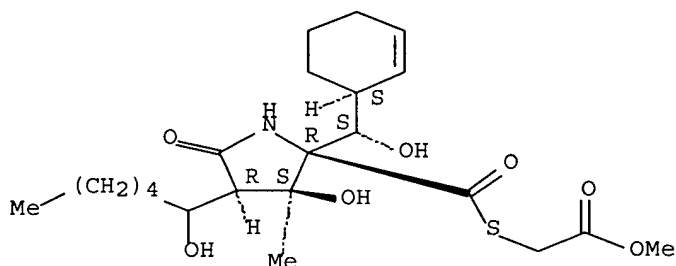
Absolute stereochemistry.



RN 744200-82-6 HCAPLUS

CN Acetic acid, [[[2R,3S,4R)-2-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-3-hydroxy-4-(1-hydroxyhexyl)-3-methyl-5-oxo-2-pyrrolidinyl]carbonyl]thio]-, methyl ester (9CI) (CA INDEX NAME)

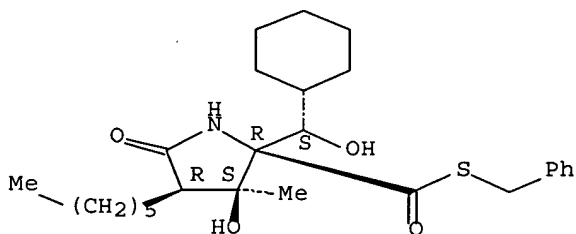
Absolute stereochemistry.



RN 744200-83-7 HCAPLUS

CN 2-Pyrrolidinecarbothioic acid, 2-[(S)-cyclohexylhydroxymethyl]-4-hexyl-3-hydroxy-3-methyl-5-oxo-, S-(phenylmethyl) ester, (2R,3S,4R)- (9CI) (CA INDEX NAME)

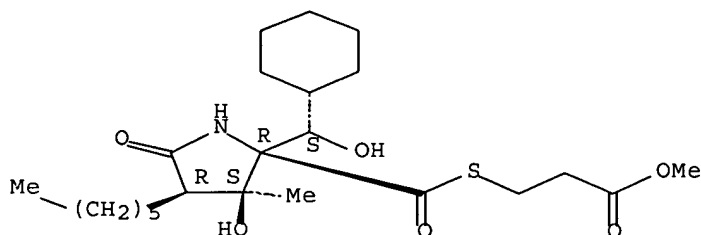
Absolute stereochemistry.



RN 744200-84-8 HCAPLUS

CN Propanoic acid, 3-[[[2R,3S,4R)-2-[(S)-cyclohexylhydroxymethyl]-4-hexyl-3-hydroxy-3-methyl-5-oxo-2-pyrrolidinyl]carbonyl]thio]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



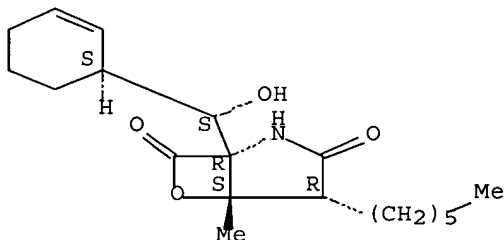
IT 744200-66-6P

RL: PAC (Pharmacological activity); PRP (Properties); PUR (Purification or recovery); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(crystal structure; Preparation of 6-oxa-2-azabicyclo[3.2.0]heptane-3,7-dione (salinosporamide) derivs. for inhibition of proteasomes and treatment of proteasome-mediated diseases)

RN 744200-66-6 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-hexyl-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L32 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:178063 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 130:296964

TITLE: The structural requirements for inhibition of proteasome function by the lactacystin-derived β -lactone and synthetic analogs

AUTHOR(S): Corey, E. J.; Li, Wei-Dong Z.; Nagamitsu, Tohru; Fenteany, Gabriel

CORPORATE SOURCE: Department of Chemistry and Chemical Biology, Harvard University, Cambridge, MA, 02138, USA

SOURCE: Tetrahedron (1999), 55(11), 3305-3316

CODEN: TETRAB; ISSN: 0040-4020

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The synthesis of analogs of clasto-lactacystin β -lactone in which the substituents at C(5), C(7) and C(9) were systematically varied has led to a well defined structure-activity correlation for the highly selective inhibition of the mammalian 20 S proteasome.

IT 223246-07-9P

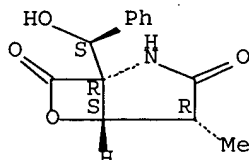
RL: EAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(structural requirements for inhibition of proteasome function by lactacystin-derived β -lactone and synthetic analogs)

RN 223246-07-9 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-hydroxyphenylmethyl]-4-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 212772-62-8

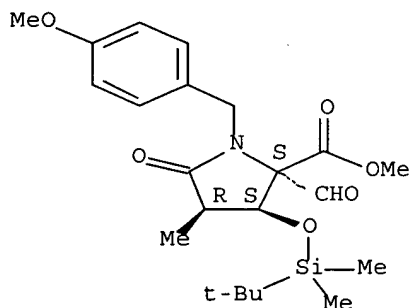
RL: RCT (Reactant); RACT (Reactant or reagent)

(structural requirements for inhibition of proteasome function by lactacystin-derived β -lactone and synthetic analogs)

RN 212772-62-8 HCAPLUS

CN D-Proline, 3-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]-2-formyl-1-[(4-methoxyphenyl)methyl]-4-methyl-5-oxo-, methyl ester, (3S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 212075-76-8P 223246-01-3P 223246-02-4P

223246-03-5P 223246-16-0P 223246-18-2P

223246-21-7P 223246-22-8P 223246-23-9P

223246-24-0P 223246-25-1P

RL: RCT (Reactant); SPN (Synthetic preparation);

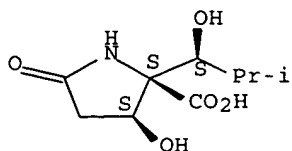
PREP (Preparation); RACT (Reactant or reagent)

(structural requirements for inhibition of proteasome function by lactacystin-derived β -lactone and synthetic analogs)

RN 212075-76-8 HCAPLUS

CN D-Proline, 3-hydroxy-2-[(1S)-1-hydroxy-2-methylpropyl]-5-oxo-, (3S)- (9CI) (CA INDEX NAME)

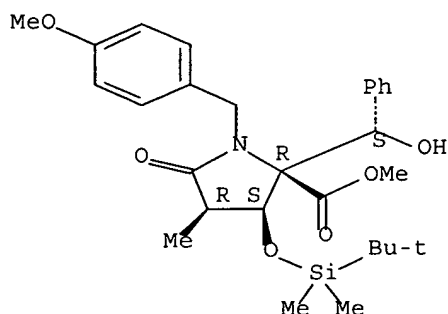
Absolute stereochemistry. Rotation (+).



RN 223246-01-3 HCAPLUS

CN D-Proline, 3-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]-2-[(S)-hydroxyphenylmethyl]-1-[(4-methoxyphenyl)methyl]-4-methyl-5-oxo-, methyl ester, (3S,4R)- (9CI) (CA INDEX NAME)

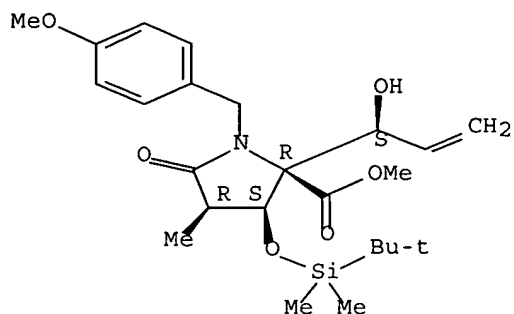
Absolute stereochemistry. Rotation (+).



RN 223246-02-4 HCAPLUS

CN D-Proline, 3-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]-2-[(1S)-1-hydroxy-2-propenyl]-1-[(4-methoxyphenyl)methyl]-4-methyl-5-oxo-, methyl ester, (3S,4R)- (9CI) (CA INDEX NAME)

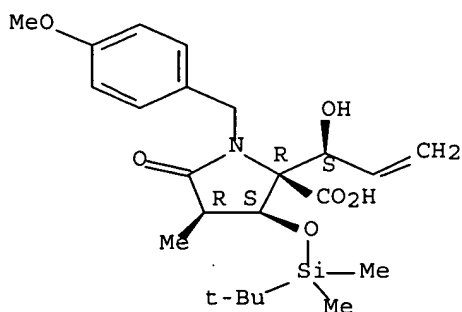
Absolute stereochemistry. Rotation (-).



RN 223246-03-5 HCAPLUS

CN D-Proline, 3-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]-2-[(1S)-1-hydroxy-2-propenyl]-1-[(4-methoxyphenyl)methyl]-4-methyl-5-oxo-, (3S,4R)- (9CI) (CA INDEX NAME)

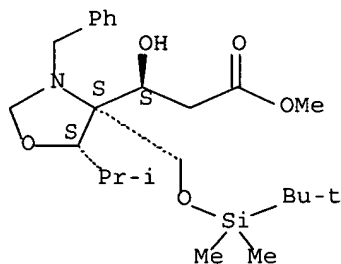
Absolute stereochemistry.



RN 223246-16-0 HCAPLUS

CN 4-Oxazolidinepropanoic acid, 4-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]methyl]-β-hydroxy-5-(1-methylethyl)-3-(phenylmethyl)-, methyl ester, (βS,4S,5S)- (9CI) (CA INDEX NAME)

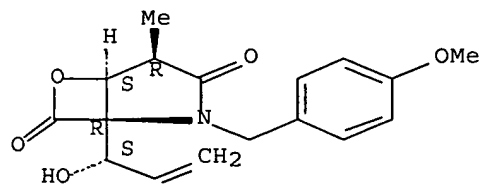
Absolute stereochemistry. Rotation (-).



RN 223246-18-2 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(1S)-1-hydroxy-2-propenyl]-2-[(4-methoxyphenyl)methyl]-4-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

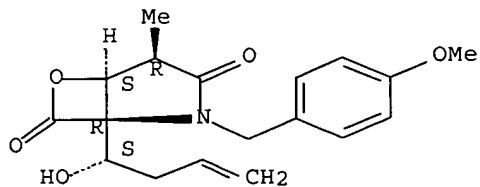
Absolute stereochemistry. Rotation (-).



RN 223246-21-7 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(1S)-1-hydroxy-3-butenyl]-2-[(4-methoxyphenyl)methyl]-4-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

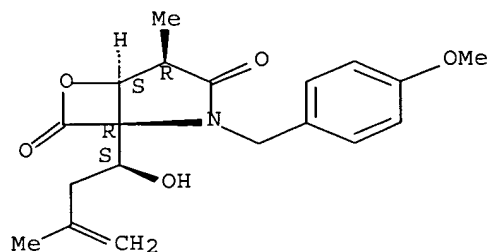
Absolute stereochemistry. Rotation (-).



RN 223246-22-8 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(1S)-1-hydroxy-3-methyl-3-butenyl]-2-[(4-methoxyphenyl)methyl]-4-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

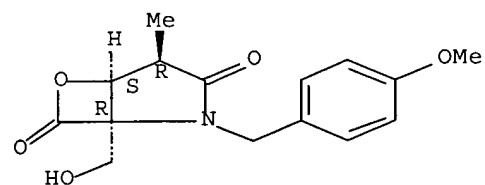
Absolute stereochemistry. Rotation (-).



RN 223246-23-9 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-(hydroxymethyl)-2-[(4-methoxyphenyl)methyl]-4-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

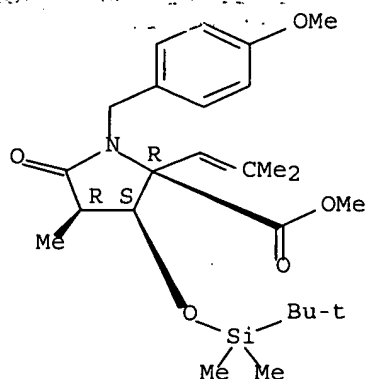
Absolute stereochemistry.



RN 223246-24-0 HCAPLUS

CN D-Proline, 3-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]-1-[(4-methoxyphenyl)methyl]-4-methyl-2-(2-methyl-1-propenyl)-5-oxo-, methyl ester, (3S,4R)- (9CI) (CA INDEX NAME)

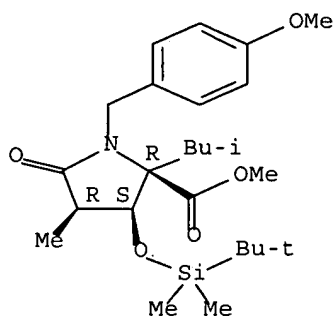
Absolute stereochemistry.



RN 223246-25-1 HCAPLUS

CN D-Proline, 3-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]-1-[(4-methoxyphenyl)methyl]-4-methyl-2-(2-methylpropyl)-5-oxo-, methyl ester, (3S,4R) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



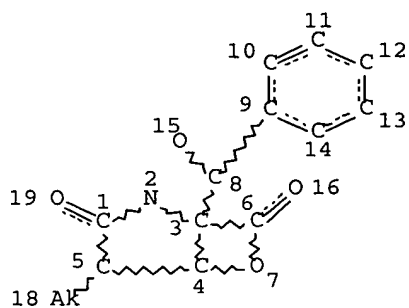
REFERENCE COUNT:

21

THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L4 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

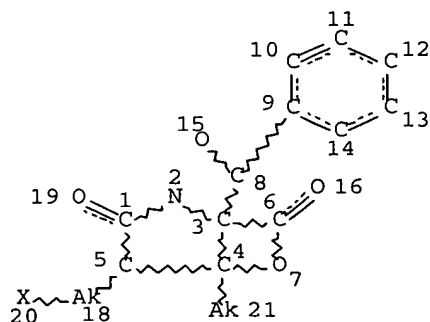
NUMBER OF NODES IS 18

STEREO ATTRIBUTES: NONE

L6 40 SEA FILE=REGISTRY SSS FUL L4

L7 16 SEA FILE=HCAPLUS ABB=ON PLU=ON L6 (L) PREP+NT/RL

L8 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 20

STEREO ATTRIBUTES: NONE

L10 16 SEA FILE=REGISTRY SUB=L6 SSS FUL L8

L11 11 SEA FILE=HCAPLUS ABB=ON PLU=ON L10 (L) PREP+NT/RL

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L13 4 SEA FILE=REGISTRY ABB=ON PLU=ON L12 AND C6/ES AND O>4 AND NR=1 AND N>0

L14 7 SEA FILE=HCAPLUS ABB=ON PLU=ON L13(L) RACT+NT/RL

L15 9 SEA FILE=REGISTRY ABB=ON PLU=ON L12 AND (C6 AND NCOC2)/ES AND O>3

L16 6 SEA FILE=HCAPLUS ABB=ON PLU=ON L15(L) RACT+NT/RL AND L15(L) PRE P+NT/RL

L17 123 SEA FILE=REGISTRY ABB=ON PLU=ON C6/ES AND O>4 AND L12

L18 15 SEA FILE=HCAPLUS ABB=ON PLU=ON L17(L) RACT+NT/RL AND L17(L) PRE P+NT/RL

L19 144 SEA FILE=REGISTRY ABB=ON PLU=ON O>4 AND N>0 AND L12

L20 119 SEA FILE=HCAPLUS ABB=ON PLU=ON L19(L) RACT+NT/RL AND L19(L) PRE P+NT/RL

L22 30 SEA FILE=REGISTRY ABB=ON PLU=ON SI/ELS AND L12

L23 7 SEA FILE=HCAPLUS ABB=ON PLU=ON L22(L) RACT+NT/RL AND L22(L) PRE P+NT/RL

L24 1 SEA FILE=REGISTRY ABB=ON PLU=ON L12 AND ZN/ELS

L25 4 SEA FILE=HCAPLUS ABB=ON PLU=ON L24(L) RACT+NT/RL

L27 1537291 SEA FILE=REGISTRY ABB=ON PLU=ON NC4/ES

L28 69 SEA FILE=REGISTRY ABB=ON PLU=ON L12 AND L27

L29 20 SEA FILE=HCAPLUS ABB=ON PLU=ON L28(L) RACT+NT/RL AND L28(L) PRE P+NT/RL

L30 12 SEA FILE=HCAPLUS ABB=ON PLU=ON L7 AND (L14 OR L16 OR L18 OR L20 OR L23 OR L25 OR L29)

L31 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 AND L11

L33 4 SEA FILE=HCAPLUS ABB=ON PLU=ON L7 NOT (L30 OR L31)

=> d l33 ibib abs hitstr 1-4

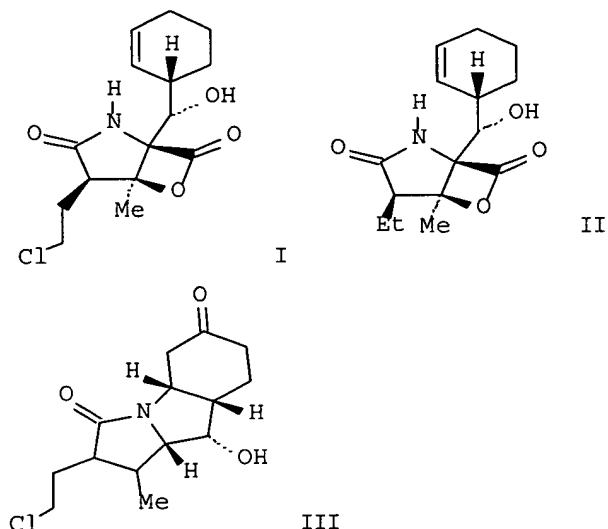
L33 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:567385 HCAPLUS Full-text

DOCUMENT NUMBER: 143:244731

TITLE: New cytotoxic salinosporamides from the marine actinomycete *Salinispora tropica*

AUTHOR(S): Williams, Philip G.; Buchan, Greg O.; Feling, Robert H.; Kauffman, Christopher A.; Jensen, Paul R.; Fenical, William
 CORPORATE SOURCE: Center for Marine Biotechnology and Biomedicine, Scripps Institution of Oceanography, University of California-San Diego, La Jolla, CA, 92093-0204, USA
 SOURCE: Journal of Organic Chemistry (2005), 70(16), 6196-6203
 CODEN: JOCEAH; ISSN: 0022-3263
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 GI



AB An extensive study of the secondary metabolites produced by the obligate marine actinomycete *S. tropica* (strain CNB-392), the producing microbe of the potent proteasome inhibitor salinosporamide A (I), has led to the isolation of 7 related γ -lactams. The most important of these compds. were salinosporamide B (II), which is the deschloro analog of I, and salinosporamide C (III), which is a decarboxylated pyrrole analog. New SAR data for all 8 compds., derived from extensive testing against the human colon carcinoma HCT-116 and the 60-cell-line panel at the NCI, indicate that the chloroethyl moiety plays a major role in the enhanced activity of I.

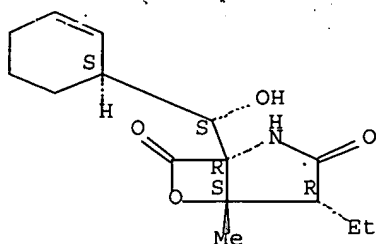
IT 863126-95-8P, Salinosporamide B

RL: BSU (Biological study, unclassified); NPO (Natural product occurrence); PRP (Properties); PUR (Purification or recovery);
 BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
 (new cytotoxic salinosporamides from the marine actinomycete *Salinispora tropica*)

RN 863126-95-8 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-ethyl-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L33 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:29196 HCAPLUS Full-text

DOCUMENT NUMBER: 142:107451

TITLE: Methods using [3.2.0]-heterocyclic compounds and analogs thereof for the treatment of cancer, an inflammatory condition, and/or an infectious disease

INVENTOR(S): Palladino, Michael; Neuteboom, Saskia Theodora Cornelia; Macherla, Venkata Rami Reddy; Potts, Barbara Christine

PATENT ASSIGNEE(S): Nereus Pharmaceuticals, Inc., USA

SOURCE: PCT Int. Appl., 184 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005002572	A2	20050113	WO 2004-US19543	20040618
WO 2005002572	A3	20050512		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2004253478	A1	20050113	AU 2004-253478	20040618
CA 2532066	AA	20050113	CA 2004-2532066	20040618
US 2005049294	A1	20050303	US 2004-871368	20040618
EP 1638552	A2	20060329	EP 2004-776757	20040618
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK			
BR 2004011677	A	20060829	BR 2004-11677	20040618
PRIORITY APPLN. INFO.:			US 2003-480270P	P 20030620
			US 2004-566952P	P 20040430
			WO 2004-US19543	W 20040618

OTHER SOURCE(S): MARPAT 142:107451

AB Methods are disclosed for treating cancer, inflammatory conditions, and/or infectious disease in an animal comprising administering a therapeutically effective amount of a heterocyclic compound. The animal is a mammal, preferably a human or a rodent. Production of compds. by fermentation and synthesis is described.

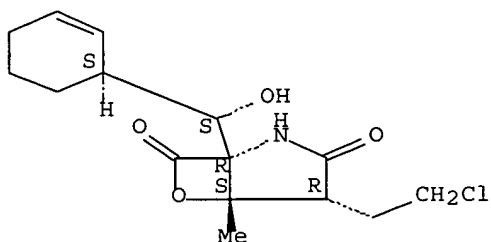
IT 437742-34-2P, Salinosporamide A

RL: BPN (Biosynthetic preparation); DMA (Drug mechanism of action); PAC (Pharmacological activity); PKT (Pharmacokinetics); PRP (Properties); PUR (Purification or recovery); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(heterocyclic compds. and analogs for treatment of cancer, inflammation, and/or infectious disease)

RN 437742-34-2 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(S)-[(1S)-2-cyclohexen-1-yl]hydroxymethyl]-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



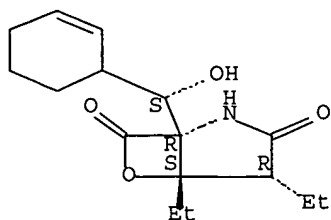
IT 823229-30-7P 823229-32-9P

RL: BPN (Biosynthetic preparation); PAC (Pharmacological activity); PUR (Purification or recovery); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(heterocyclic compds. and analogs for treatment of cancer, inflammation, and/or infectious disease)

RN 823229-30-7 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-2-cyclohexen-1-ylhydroxymethyl]-4,5-diethyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

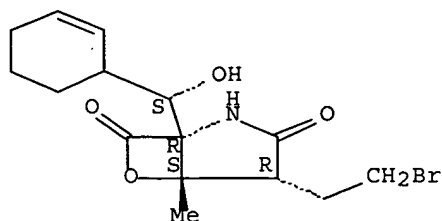


RN 823229-32-9 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-bromoethyl)-1-[(S)-2-

cyclohexen-1-ylhydroxymethyl]-5-methyl-, (1R,4R,5S) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



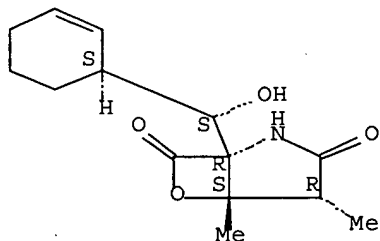
IT 823229-26-1P 823229-28-3P

RL: BPN (Biosynthetic preparation); PAC (Pharmacological activity); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (heterocyclic compds. and analogs for treatment of cancer, inflammation, and/or infectious disease)

RN 823229-26-1 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4,5-dimethyl-, (1R,4R,5S) - (9CI) (CA INDEX NAME)

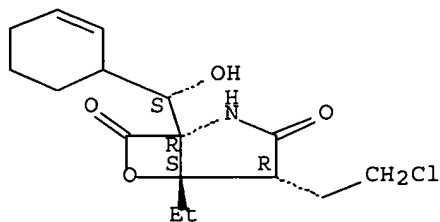
Absolute stereochemistry.



RN 823229-28-3 HCAPLUS

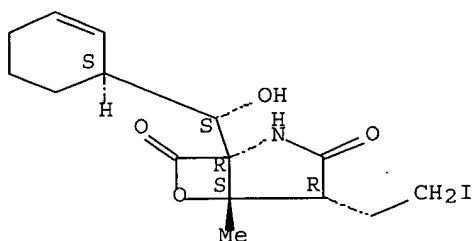
CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(S)-2-cyclohexen-1-ylhydroxymethyl]-5-ethyl-, (1R,4R,5S) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



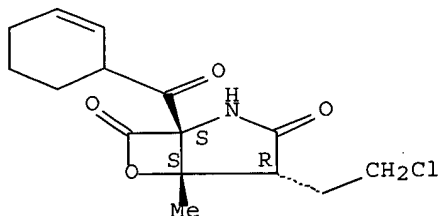
IT 823229-34-1P 823229-43-7P
 RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study);
 PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (heterocyclic compds. and analogs for treatment of cancer,
 inflammation, and/or infectious disease)
 RN 823229-34-1 HCAPLUS
 CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-(2-iodoethyl)-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



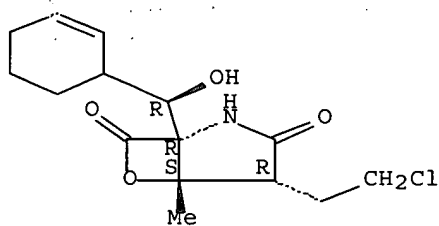
RN 823229-48-7 HCAPLUS
 CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-(2-cyclohexen-1-ylcarbonyl)-5-methyl-, (1S,4R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 823229-52-3P 823229-54-5P 823229-56-7P
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation);
 THU (Therapeutic use); BIOL (Biological study); PREP (Preparation)
 ; USES (Uses)
 (heterocyclic compds. and analogs for treatment of cancer,
 inflammation, and/or infectious disease)
 RN 823229-52-3 HCAPLUS
 CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(R)-2-cyclohexen-1-ylhydroxymethyl]-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

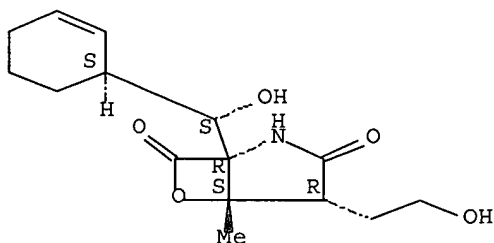
Absolute stereochemistry.



RN 823229-54-5 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-4-(2-hydroxyethyl)-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

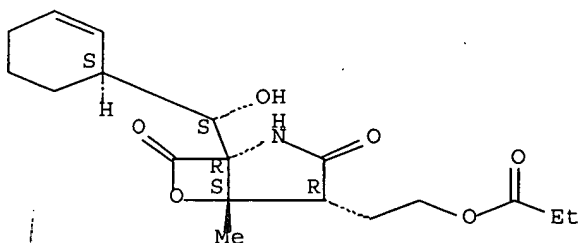
Absolute stereochemistry.



RN 823229-56-7 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(S)-(1S)-2-cyclohexen-1-ylhydroxymethyl]-5-methyl-4-[2-(1-oxopropoxy)ethyl]-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L33 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:1127086 HCAPLUS Full-text

DOCUMENT NUMBER: 142:54864

TITLE: Salinosporamides and methods for use thereof

INVENTOR(S): Fenical, William; Jensen, Paul; Mincer, Tracy; Feling, Robert H. R.

PATENT ASSIGNEE(S): The Regents of the University of California, USA

10/821,621

September 22, 2006

SOURCE: U.S. Pat Appl. Publ , 30 pp., Contn-in+part of U.S.
 Ser. No. 600,854.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004259856	A1	20041223	US 2004-838157	20040430
US 2004138196	A1	20040715	US 2003-600854	20030620
AU 2004253879	A1	20050113	AU 2004-253879	20040618
CA 2530215	AA	20050113	CA 2004-2530215	20040618
WO 2005003137	A1	20050113	WO 2004-US19453	20040618

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1638977	A1	20060329	EP 2004-776728	20040618
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				

CN 1823070	A	20060823	CN 2004-80020530	20040618
US 2005239866	A1	20051027	US 2005-147622	20050607

PRIORITY APPLN. INFO.:
 US 2002-391314P P ~~20020624~~
 US 2003-600854 A2 20030620
 US 2004-838157 A 20040430
 WO 2004-US19453 W 20040618

OTHER SOURCE(S): MARPAT 142:54864

AB The present invention is based on the discovery that certain fermentation products of the marine actinomycete strains CNB392 and CNB476 are effective inhibitors of hyperproliferative mammalian cells. The CNB392 and CNB476 strains lie within the family Micromonosporaceae, and the generic epithet Salinospora has been proposed for this obligate marine group. The reaction products produced by this strain are classified as salinosporamides, and are particularly advantageous in treating neoplastic disorders due to their low mol. weight, low IC 50 values, high pharmaceutical potency, and selectivity for cancer cells over fungi.

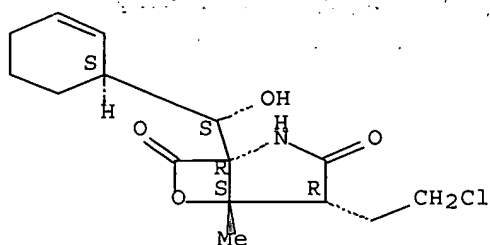
IT 437742-34-2P, Salinosporamide A

RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (anticancer salinosporamide)

RN 437742-34-2 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(S)-[(1S)-2-cyclohexen-1-yl]hydroxymethyl]-5-methyl-, (1R,4R,5S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



L33 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2004:570502 HCAPLUS Full-text
 DOCUMENT NUMBER: 141:105361
 TITLE: Salinosporamides and methods for use thereof
 INVENTOR(S): Fenical, William; Jensen, Paul; Mincer, Tracy; Feling, Robert H. R.
 PATENT ASSIGNEE(S): USA
 SOURCE: U.S. Pat. Appl. Publ., 26 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004138196	A1	20040715	US 2003-600854	20030620
US 2004259856	A1	20041223	US 2004-838157	20040430
AU 2004253879	A1	20050113	AU 2004-253879	20040618
CA 2530215	AA	20050113	CA 2004-2530215	20040618
WO 2005003137	A1	20050113	WO 2004-US19453	20040618
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1638977	A1	20060329	EP 2004-776728	20040618
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
CN 1823070	A	20060823	CN 2004-80020530	20040618
US 2005239866	A1	20051027	US 2005-147622	20050607
PRIORITY APPLN. INFO.:				
			US 2002-391314P	P 20020624
			US 2003-600854	A2 20030620
			US 2004-838157	A 20040430
			WO 2004-US19453	W 20040618

OTHER SOURCE(S): MARPAT 141:105361

AB The present invention is based on the discovery that certain fermentation products of the marine actinomycete strains CNB392 and CNB476 are effective inhibitors of hyperproliferative mammalian cells. The CNB392 and CNB476 strains lie within the family Micromonosporaceae, and the generic epithet

Salinospora has been proposed for this obligate marine group. The reaction products produced by this strain are classified as salinosporamides, and are particularly advantageous in treating neoplastic disorders due to their low mol. weight, low IC 50 values, high pharmaceutical potency, and selectivity for cancer cells over fungi.

IT 437742-34-2P, Salinosporamide A

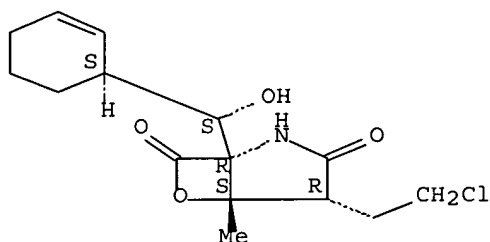
RL: BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)

(salinosporamides and anticancer use thereof)

RN 437742-34-2 HCAPLUS

CN 6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 4-(2-chloroethyl)-1-[(S)-[(1S)-2-cyclohexen-1-yl]hydroxymethyl]-5-methyl-, (1R,4R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



=> fil beilst
FILE 'BEILSTEIN' ENTERED AT 10:33:11 ON 22 SEP 2006
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licensed to Beilstein GmbH and MDL Information Systems GmbH

FILE LAST UPDATED ON JUNE 16, 2006

FILE COVERS 1771 TO 2006.

*** FILE CONTAINS 9,606,495 SUBSTANCES ***

>>>PLEASE NOTE: Reaction Data and substance data are stored in
separate documents and can not be searched together in one query.
Reaction data for BEILSTEIN compounds may be displayed
immediately with the display codes PRE (preparations) and REA
(reactions). A substance answer set retrieved after the search
for a chemical name, a compounds with available reaction
information by combining with PRE/FA, REA/FA or more generally
with RX/FA. The BEILSTEIN Registry Number (BRN) is the link
between a BEILSTEIN compound and belonging reactions. For mo
detailed reaction searches BRNs can be searched as reaction
partner BRNs Reactant BRN (RX.RBRN) or Product BRN (RX.PBRN).<<<

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* ARE BASED ON THE HIGHEST PRICE CATEGORY. THEREFORE; THESE *
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* FOR PRICE INFORMATION SEE HELP COST *

NEW

* PATENT NUMBERS (PN) AND BABS ACCESSION NUMBERS (BABSAN) CAN NOW BE
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ALL PATENT REFERENCES, OR ALL BABS ACCESSION NUMBERS FOR A
COMPOUND AT A GLANCE.

=> d que 135

L35 5 SEA FILE=BEILSTEIN ABB=ON PLU=ON (10187632/RX.PBRN OR
10190531/RX.PBRN OR 10190532/RX.PBRN OR 10190534/RX.PBRN OR
10193505/RX.PBRN OR 10193538/RX.PBRN OR 9349224/RX.PBRN)

=> d 135 ide rx 1-5

L35 ANSWER 1 OF 5 BEILSTEIN COPYRIGHT 2006 BEILSTEIN MDL on STN
This is a Reaction Document. Display Formats IDE and FA are not available
here.

Reaction:

RX

Reaction ID (.ID):	10072318
Reactant BRN (.RBRN):	9349224
Reactant (.RCT):	salinosporamide A
Product BRN (.PBRN):	10193538
Product (.PRO):	NPI-2070
No. of React. Details (.NVAR):	1

Reaction Details:

RX

Reaction RID (.RID): 10072318.1
Reaction Classification (.CL): Preparation
Yield (.YDT): 11 percent (BRN=10193538)
Reagent (.RGT): NaI
Solvent (.SOL): acetone
Time (.TIM): 6 day(s)
Reference(s):

1. Macherla, Venkat R.; Mitchell, Scott S.; Manam, Rama Rao; Reed, Katherine A.; Chao, Ta-Hsiang; Nicholson, Benjamin; Deyanat-Yazdi, Gordafaried; Mai, Bao; Jensen, Paul R.; Fenical, William F.; Neuteboom, Saskia T. C.; et al., J. Med. Chem., CODEN: JMCMAR, SIR48(11), <2005>, 3684 - 3687; BABS-6528037

L35 ANSWER 2 OF 5 BEILSTEIN COPYRIGHT 2006 BEILSTEIN MDL on STN

This is a Reaction Document. Display Formats IDE and FA are not available here.

Reaction:

RX

Reaction ID (.ID): 10072315
Reactant BRN (.RBRN): 9349224
Reactant (.RCT): salinosporamide A
Product BRN (.PBRN): 10187632
Product (.PRO): NPI-2062
No. of React. Details (.NVAR): 1

Reaction Details:

RX

Reaction RID (.RID): 10072315.1
Reaction Classification (.CL): Preparation
Reagent (.RGT): Dess-Martin periodinane
Solvent (.SOL): CH₂Cl₂
Time (.TIM): 2 hour(s)
Temperature (.T): 20 Cel
Reference(s):

1. Macherla, Venkat R.; Mitchell, Scott S.; Manam, Rama Rao; Reed, Katherine A.; Chao, Ta-Hsiang; Nicholson, Benjamin; Deyanat-Yazdi, Gordafaried; Mai, Bao; Jensen, Paul R.; Fenical, William F.; Neuteboom, Saskia T. C.; et al., J. Med. Chem., CODEN: JMCMAR, SIR48(11), <2005>, 3684 - 3687; BABS-6528037

L35 ANSWER 3 OF 5 BEILSTEIN COPYRIGHT 2006 BEILSTEIN MDL on STN

This is a Reaction Document. Display Formats IDE and FA are not available here.

Reaction:

RX

Reaction ID (.ID): 10001896
Reactant BRN (.RBRN): 10187632
Reactant (.RCT): NPI-2062
Product BRN (.PBRN): 10190531
Product (.PRO): NPI-2076
No. of React. Details (.NVAR): 1

Reaction Details:

RX

Reaction RID (.RID): 10001896.1
Reaction Classification (.CL): Preparation
Yield (.YDT): 30 percent (BRN=10190531)
Reagent (.RGT): NaBH₄
Solvent (.SOL): 1,2-dimethoxy-ethane, H₂O
Time (.TIM): 14 min
Temperature (.T): -78 Cel
Reference(s):

1. Macherla, Venkat R.; Mitchell, Scott S.; Manam, Rama Rao; Reed, Katherine A.; Chao, Ta-Hsiang; Nicholson, Benjamin; Deyanat-Yazdi, Gordafaried; Mai, Bao; Jensen, Paul R.; Fenical, William F.; Neuteboom, Saskia T. C.; et al., J. Med. Chem., CODEN: JMCMAR, SIR48(11), <2005>, 3684 - 3687; BABS-6528037

L35 ANSWER 4 OF 5 BEILSTEIN COPYRIGHT 2006 BEILSTEIN MDL on STN

This is a Reaction Document. Display Formats IDE and FA are not available here.

Reaction:

RX

Reaction ID (.ID): 9918214
Reactant BRN (.RBRN): 10102697
Reactant (.RCT): 1-(cyclohex-2-enyl-hydroxy-methyl)-4-(2-hydroxy-ethyl)-5-methyl-6-oxa-2-aza-bicyclo<3.2.0>heptane-3,7-dione
Product BRN (.PBRN): 9349224
Product (.PRO): salinosporamide A
No. of React. Details (.NVAR): 1

Reaction Details:

RX

Reaction RID (.RID): 9918214.1
Reaction Classification (.CL): Preparation
Yield (.YDT): 6.8 mg (BRN=9349224)
Reagent (.RGT): PH₃PCl₂
Solvent (.SOL): pyridine, acetonitrile
Time (.TIM): 4 hour(s)
Temperature (.T): 20 Cel
Reference(s):
1. Endo, Atsushi; Danishefsky, Samuel J., J. Am. Chem. Soc., CODEN: JACSAT, SIR127(23), <2005>, 8298 - 8299; BABS-6510529

L35 ANSWER 5 OF 5 BEILSTEIN COPYRIGHT 2006 BEILSTEIN MDL on STN

This is a Reaction Document. Display Formats IDE and FA are not available here.

Reaction:

RX

Reaction ID (.ID): 9623610
Reactant BRN (.RBRN): 9727083
Reactant (.RCT): 2-(cyclohex-2-enyl-hydroxy-methyl)-3-hydroxy-4-(2-hydroxy-ethyl)-3-methyl-5-oxo-pyrrolidine-2-carboxylic acid
Product BRN (.PBRN): 9349224
Product (.PRO): salinosporamide A
No. of React. Details (.NVAR): 1

Reaction Details:

Reaction RID (.RID): 9623610.1
Reaction Classification (.CL): Multistage
Yield (.YDT): 100 mg (BRN=9349224)
Nr. of Stages (.SNR): 2
Stage 1
Reagent (.RGT): bis(2-oxo-3-oxazolidinyl)phosphonic
chloride, pyridine
Solvent (.SOL): CH₂Cl₂
Time (.TIM): 1 hour(s)
Temperature (.T): 23 Cel
Stage 2
Reagent (.RGT): pyridine, PPh₃Cl₂
Solvent (.SOL): acetonitrile, CH₂Cl₂
Time (.TIM): 1 hour(s)
Temperature (.T): 23 Cel
Reference(s):
1. Reddy, Leleti Rajender; Saravanan, P.; Corey, E. J., J. Am. Chem. Soc.,
CODEN: JACSAT, 126(20), <2004>, 6230 - 6231; BABS-6446758

INVENTOR SEARCH

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FILE 'EMBASE' ENTERED AT 10:33:55 ON 22 SEP 2006

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FILE 'BIOSIS' ENTERED AT 10:33:55 ON 22 SEP 2006

Copyright (c) 2006 The Thomson Corporation

=> d que l42

L38 2176 SEA ("COREY E"/AU OR "COREY E J"/AU OR "COREY E J AND GREGORY
A REICHARD"/AU OR "COREY E JAMES"/AU) OR ("COREY ELIAS J"/AU
OR "COREY ELIAS J JR"/AU OR "COREY ELIAS JAMES"/AU)
L39 16 SEA L38 AND ?SALINO?
L40 15 SEA L38 AND ?SPORAMID?
L41 16 SEA L39 OR L40
L42 7 DUP REM L41 (9 DUPLICATES REMOVED)

=> d l42 ibib abs 1-7

L42 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 2005:1117942 HCAPLUS Full-text

DOCUMENT NUMBER: 144:22739

TITLE: Proteasome Inhibition by a Totally Synthetic
 β -Lactam Related to Salinosporamide A
and Omuralide

AUTHOR(S): Hogan, Philip C.; Corey, E. J.

CORPORATE SOURCE: Department of Chemistry and Chemical Biology, Harvard
University, Cambridge, MA, 02138, USA

SOURCE: Journal of the American Chemical Society (2005),
127(44), 15386-15387

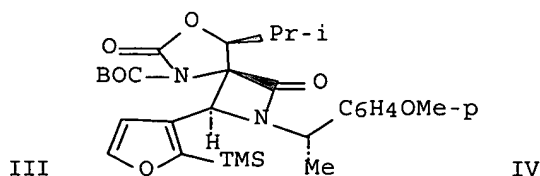
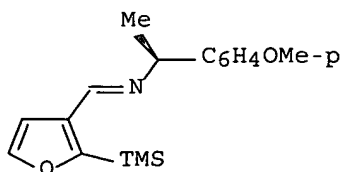
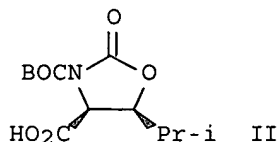
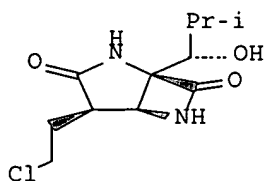
CODEN: JACSAJ; ISSN: 0002-7863

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



AB A new and effective proteasome inhibitor, β -lactam I, has been accessed enantioselectively by multistep synthesis from the readily prepared intermediates II and III which were joined by a [2 + 2]-cycloaddn. reaction to form the spiro β -lactam IV stereoselectively. The intermediate IV was converted to I in seven steps and 30% overall yield. The β -lactam I is stable for many days in water at pH 7, in contrast to the natural β -lactones salinosporamide A and omuralide. In common with salinosporamide A and omuralide, the β -lactam I effectively inhibits the mammalian proteasome.

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L42 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2

ACCESSION NUMBER: 2005:470433 HCAPLUS Full-text

DOCUMENT NUMBER: 143:172666

TITLE: An Efficient, Stereocontrolled Synthesis of a Potent Omuralide-Salinosporin Hybrid for Selective Proteasome Inhibition

AUTHOR(S): Reddy, Leleti Rajender; Fournier, Jean-Francois; Reddy, B. V. Subba; Corey, E. J.

CORPORATE SOURCE: Department of Chemistry and Chemical Biology, Harvard University, Cambridge, MA, 02138, USA

SOURCE: Journal of the American Chemical Society (2005), 127(25), 8974-8976

CODEN: JACSAT; ISSN: 0002-7863

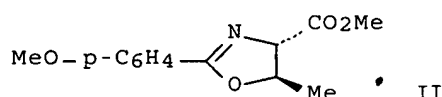
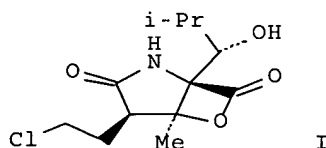
PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 143:172666

GI



AB A short and highly stereocontrolled synthesis of the potent proteasome inhibitor I (antiprotealide) from the (S)-threonine-derived oxazoline II has been developed. The key steps include a diastereoselective aldol coupling, an internal carbo-titanation using Kulinkovich reagent, diastereoselective cyclization, and demethylation with [Me₂AlTeMe]₂. The potency of I against the β 5-subunit of human 20S proteasome was about 2.5 times that of omuralide.

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L42 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3

ACCESSION NUMBER: 2005:443900 HCAPLUS Full-text

DOCUMENT NUMBER: 143:115371

TITLE: New Synthetic Route for the Enantioselective Total Synthesis of Salinosporamide A and

Biologically Active Analogues
AUTHOR(S): Reddy, Leleti Rajender; Fournier, Jean-Francois;
Reddy, B. V. Subba; Corey, E. J.
CORPORATE SOURCE: Department of Chemistry and Chemical Biology, Harvard
University, Cambridge, MA, 02138, USA
SOURCE: Organic Letters (2005), 7(13), 2699-2701
CODEN: ORLEF7; ISSN: 1523-7060
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 143:115371
GI

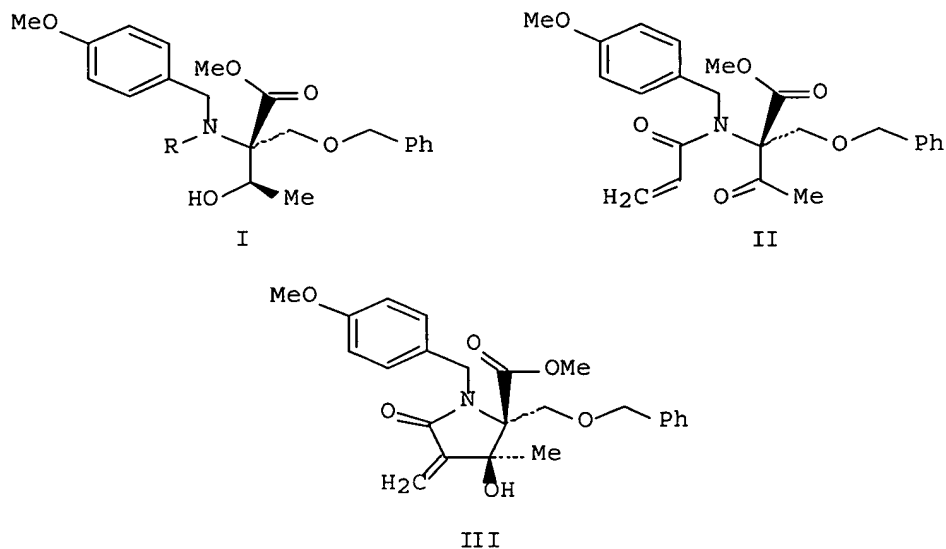
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A total synthesis of the salinosporamide analog I is described. A key step early in the synthesis was the Baylis-Hillman cyclization of II to the γ -lactam III with 9:1 diastereoselectivity and in good yield. In addition, the γ -lactam III has been transformed efficiently into β -Me omuralide (IV).

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L42 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 4

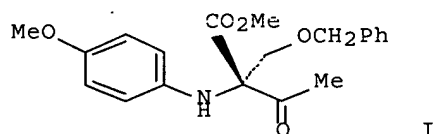
ACCESSION NUMBER: 2004:340603 HCAPLUS Full-text
DOCUMENT NUMBER: 141:54117
TITLE: A Simple Stereocontrolled Synthesis of
Salinosporamide A
AUTHOR(S): Reddy, Leleti Rajender; Saravanan, P.; Corey, E.
J.
CORPORATE SOURCE: Department of Chemistry and Chemical Biology, Harvard
University, Cambridge, MA, 02138, USA
SOURCE: Journal of the American Chemical Society (2004),
126(20), 6230-6231
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 141:54117
GI



AB A simple and effective stereocontrolled synthesis of **salinosporamide A** has been developed. Of special note is the direct conversion of amino(benzyloxymethyl)hydroxybutanoate I (R = H) to acryloyl derivative I (R = COCH:CH₂). Also, quinuclidine proved to be superior to other bases in the cyclization of oxybutanoate II to oxopyrrolidinecarboxylate III. This process, the first synthesis of **salinosporamide A**, is capable of providing the compound in substantial quantities for further biol. studies. **Salinosporamide A** was of special interest as a synthetic target because of its potent in vitro cytotoxic activity against many tumor cell lines (IC₅₀ values of 10 nM or less).

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L42 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2006:274086 HCAPLUS Full-text
 DOCUMENT NUMBER: 145:7903
 TITLE: Novel Bicyclization Reaction Leading to a Fused β -Lactone
 AUTHOR(S): Reddy, Leleti Rajender; Corey, E. J.
 CORPORATE SOURCE: Harvard University, Cambridge, MA, 02138, USA
 SOURCE: Organic Letters (2006), 8(8), 1717-1719
 CODEN: ORLEF7; ISSN: 1523-7060
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 GI



AB The reaction of acryloyl chloride with the amino ketone I in the presence of pyridine produces bicyclic β -lactones rather than the corresponding acrylamide, which can be the major product under other conditions and which is an intermediate for the synthesis of salinosporamide A.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L42 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:1154365 HCAPLUS Full-text

DOCUMENT NUMBER: 143:422201

TITLE: Preparation of salinosporamide A for use in anticancer pharmaceutical compositions as proteasome inhibitors

INVENTOR(S): Corey, Elias J.

PATENT ASSIGNEE(S): President and Fellows of Harvard College, USA

SOURCE: PCT Int. Appl., 66 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

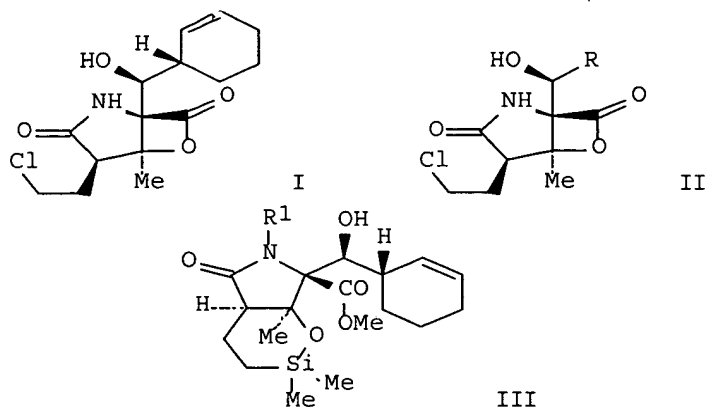
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005099687	A2	20051027	WO 2005-US12113	20050411
WO 2005099687	A3	20051229		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: US 2004-560877P P 20040409

OTHER SOURCE(S): MARPAT 143:422201

GI



AB **Salinosporamide A** (I) and its analogs, such as II (R = alkyl, alkenyl, etc.), were enantioselectively synthesized starting from N-(4-methoxybenzoyl)-L-threonine Me ester via several novel synthetic intermediates, such as lactam II (R1 = CH₂C₆H₄-4-OMe). The compds. of this invention have been shown to inhibit the proteasome, an intracellular enzyme complex that destroys proteins the cell no longer needs. Without the proteasome, proteins would build up and clog cellular machinery. Fast-growing cancer cells make especially heavy use of the proteasome, so thwarting its action is a compelling drug strategy.

L42 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2005:1106831 HCAPLUS Full-text
 DOCUMENT NUMBER: 143:386848
 TITLE: Simple stereocontrolled synthesis of salinosporamide A
 INVENTOR(S): Corey, Elias J.
 PATENT ASSIGNEE(S): USA
 SOURCE: U.S. Pat. Appl. Publ., 17 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005228186	A1	20051013	US 2004-821621	20040409
WO 2005113558	A2	20051201	WO 2005-US12218	20050411
WO 2005113558	A3	20051222		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

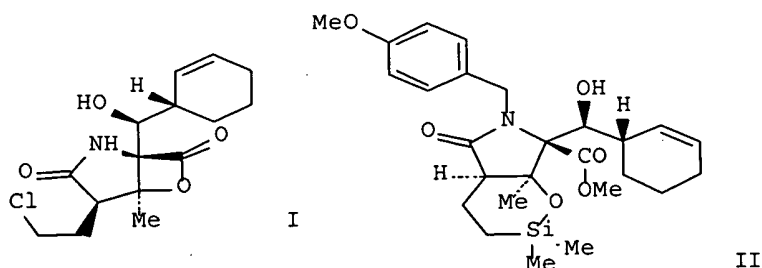
-US 2004-821621

A 20040409

OTHER SOURCE(S):

CASREACT 143:386848

GI



AB A simple and effective stereocontrolled synthesis of (-)- salinosporamide A (I) was disclosed. The process, the first total synthesis of salinosporamide A, is capable of providing the compound in substantial quantities for further biol. studies. The disclosed synthetic scheme started from N-(4-methoxybenzoyl)-L-threonine Me ester and included the preparation of several novel synthetic intermediate compds., such as lactam II. Salinosporamide A is a synthetic target of special interest because it has previously shown proteasome inhibiting activity and shown cytotoxic activity in vitro against many tumor cell lines (IC50 values of 10 nM or less).

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